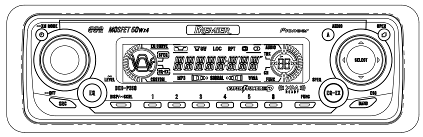
Pioneer sound.vision.soul

Service Manual



DEH-P550MP/XN/UC

ORDER NO.
CRT3002

MULTI-CD CONTROL HIGH POWER CD/MP3/WMA PLAYER WITH FM/AM TUNER

DEH-P550MP XN/UC
DEH-P5500MP XN/UC
DEH-P5550MP XN/ES

COMPACT disc DIGITAL AUDIO

Designed for Windows Media™

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-3057	CRT3026	S10MP3	CD Mech. Module:Circuit Description, Mech.Description, Disassembly



For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

K-ZZA. JAN. 2003 Printed in Japan

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts



Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

CONTENTS

● CD Player Service Precautions

1. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
2. To protect the pickup unit from electrostatic discharge during serviving, take an appropriate treatment(shorting-solder) by referring to "the DISASSEMBLY" on page 59.
3. After replacing the pickup unit, be sure to check the grating.(See p.56.)

1. SPECIFICATIONS

● DEH-P550MP/XN/UC

General

Power source .... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system .... Negative type
Max. current consumption
.... 10.0 A
Backup current
.... 5 mA or less
Dimensions (W × H × D):
DIN
Chassis .... 178 × 50 × 157 mm (7 × 2 × 6-1/8 in.)
Nose .... 188 × 58 × 20 mm (7-3/8 × 2-1/4 × 3/4 in.)
D
Chassis .... 178 × 50 × 162 mm (7 × 2 × 6-3/8 in.)
Nose .... 170 × 46 × 15 mm (6-3/4 × 1-3/4 × 5/8 in.)
Weight .... 1.4 kg (3.1 lbs)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output .... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance .... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance
.... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
Low
Frequency .... 40/80/100/160 Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Mid
Frequency .... 200/500/1k/2k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
High
Frequency .... 3.15k/8k/10k/12.5k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Loudness contour
Low .... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid .... +10 dB (100 Hz), +6.5 dB (10 kHz)
High .... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)

Tone controls:
Bass
Frequency .... 40/63/100/160 Hz
Gain .... ±12dB
Treble
Frequency .... 2.5k/4k/6.3k/10k Hz
Gain .... ±12dB
HPF:
Frequency .... 50/80/125 Hz
Slope .... –12 dB/oct
Subwoofer:
Frequency .... 50/80/125 Hz
Slope .... –18 dB/oct
Gain .... ±12dB
Phase .... Normal/Reverse

CD player

System .... Compact disc audio system
Usable discs .... Compact disc
Signal format:
Sampling frequency ..... 44.1 kHz
Number of quantization bits
.... 16; linear
Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio .... 94 dB (1 kHz) (IHF-A network)
Dynamic range .... 92 dB (1 kHz)
Number of channels .... 2 (stereo)
MP3 decoding format .... MPEG-1 & 2 Audio Layer 3
WMA decoding format .... Ver. 7 & 8

FM tuner

Frequency range .... 87.9 – 107.9 MHz
Usable sensitivity .... 8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio .... 75 dB (IHF-A network)
Distortion .... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response .... 30 – 15,000 Hz (±3 dB)
Stereo separation .... 45 dB (at 65 dBf, 1 kHz)
Selectivity .... 80 dB (±200 kHz)

Three-signal intermodulation (desired signal level)
.... 30 dBf (two undesired signal level: 100 dBf)

AM tuner

Frequency range .... 530 – 1,710 kHz (10 kHz)
Usable sensitivity .... 18 µV (S/N: 20 dB)
Signal-to-noise ratio .... 65 dB (IHF-A network)

● DEH-P5500MP/XN/UC

General

Power source .... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system .... Negative type
Max. current consumption
.... 10.0 A
Dimensions (W × H × D):
DIN
Chassis .... 178 × 50 × 157 mm (7 × 2 × 6-1/8 in.)
Nose .... 188 × 58 × 20 mm (7-3/8 × 2-1/4 × 3/4 in.)
D
Chassis .... 178 × 50 × 162 mm (7 × 2 × 6-3/8 in.)
Nose .... 170 × 46 × 15 mm (6-3/4 × 1-3/4 × 5/8 in.)
Weight .... 1.4 kg (3.1 lbs)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output .... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance .... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance
.... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
Low
Frequency .... 40/80/100/160 Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Mid
Frequency .... 200/500/1k/2k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
High
Frequency .... 3.15k/8k/10k/12.5k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Loudness contour
Low .... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid .... +10 dB (100 Hz), +6.5 dB (10 kHz)
High .... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)

Tone controls:
Bass
Frequency .... 40/63/100/160 Hz
Gain .... ±12dB
Treble
Frequency .... 2.5k/4k/6.3k/10k Hz
Gain .... ±12dB
HPF:
Frequency .... 50/80/125 Hz
Slope .... –12 dB/oct
Subwoofer:
Frequency .... 50/80/125 Hz
Slope .... –18 dB/oct
Gain .... ±12dB
Phase .... Normal/Reverse

CD player

System .... Compact disc audio system
Usable discs .... Compact disc
Signal format:
Sampling frequency ..... 44.1 kHz
Number of quantization bits
.... 16; linear
Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio .... 94 dB (1 kHz) (IHF-A network)
Dynamic range .... 92 dB (1 kHz)
Number of channels .... 2 (stereo)
MP3 decoding format .... MPEG-1 & 2 Audio Layer 3
WMA decoding format .... Ver. 7 & 8

FM tuner

Frequency range .... 87.9 – 107.9 MHz
Usable sensitivity .... 8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio .... 75 dB (IHF-A network)
Distortion .... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response .... 30 – 15,000 Hz (±3 dB)
Stereo separation .... 45 dB (at 65 dBf, 1 kHz)
Selectivity .... 80 dB (±200 kHz)
Three-signal intermodulation (desired signal level)
.... 30 dBf (two undesired signal level: 100 dBf)

AM tuner

Frequency range .... 530 – 1,710 kHz (10 kHz)
Usable sensitivity .... 18 µV (S/N: 20 dB)
Signal-to-noise ratio .... 65 dB (IHF-A network)

● DEH-P5550MP/XN/ES

General

Rated power source .... 14.4 V DC (allowable voltage range: 12.0 – 14.4 V DC)
Grounding system .... Negative type
Max. current consumption .... 10.0 A
Backup current .... 5 mA or less
Dimensions (W × H × D):
DIN
Chassis .... 178 × 50 × 157 mm
Nose .... 188 × 58 × 20 mm
D
Chassis .... 178 × 50 × 162 mm
Nose .... 170 × 46 × 15 mm
Weight .... 1.4 kg

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output .... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance .... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance .... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
Low
Frequency .... 40/80/100/160 Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Mid
Frequency .... 200/500/1k/2k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
High
Frequency .... 3.15k/8k/10k/12.5k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Loudness contour
Low .... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid .... +10 dB (100 Hz), +6.5 dB (10 kHz)
High .... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)
Tone controls:
Bass
Frequency .... 40/63/100/160 Hz
Gain .... ±12dB
Treble
Frequency .... 2.5k/4k/6.3k/10k Hz
Gain .... ±12dB
HPF:
Frequency .... 50/80/125 Hz
Slope .... –12 dB/oct
Subwoofer:
Frequency .... 50/80/125 Hz
Slope .... –18 dB/oct
Gain .... ±12dB
Phase .... Normal/Reverse

CD player

System .... Compact disc audio system
Usable discs .... Compact disc
Signal format:
Sampling frequency ..... 44.1 kHz
Number of quantization bits .... 16; linear
Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio .... 94 dB (1 kHz) (IEC-A network)
Dynamic range .... 92 dB (1 kHz)
Number of channels .... 2 (stereo)
MP3 decoding format .... MPEG-1 & 2 Audio Layer 3
WMA decoding format .... Ver. 7 & 8

FM tuner

Frequency range .... 87.5 – 108.0 MHz
Usable sensitivity .... 8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio .... 75 dB (IEC-A network)
Distortion .... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response .... 30 – 15,000 Hz (±3 dB)
Stereo separation .... 45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range .... 531 – 1,602 kHz (9 kHz)
530 – 1,640 kHz (10 kHz)
Usable sensitivity .... 18 µV (S/N: 20 dB)
Signal-to-noise ratio .... 65 dB (IEC-A network)

Infrared remote control

Wavelength .... 940 nm ±50 nm
Output .... typ; 12 mw/sr per Infrared LED

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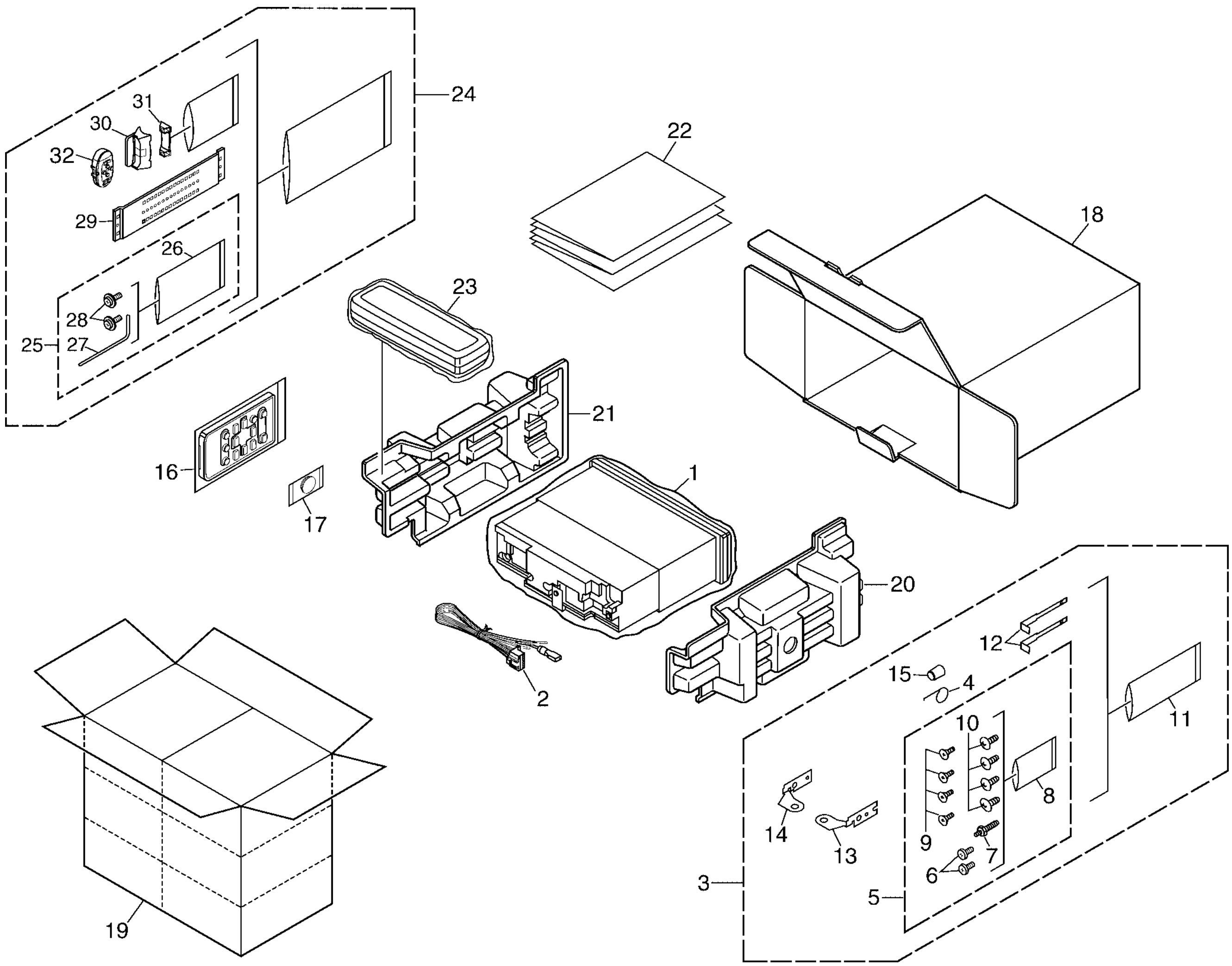
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2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING(DEH-P550MP/XN/UC, DEH-P5500MP/XN/UC)



NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
  (In the case of no amount instructions, apply as you think it appropriate.)

(1) PACKING(DEH-P550MP/XN/UC, DEH-P5500MP/XN/UC) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Polyethylene Bag	CEG1173
	2	Cord Assy	CDE7154
	3	Accessory Assy	CEA3376
	4	Spring	CBH1650
	5	Screw Assy	CEA3848
	6	Fixing Screw	BPZ20P060FZK
	7	Screw	CBA1650
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P090FTC
	10	Screw	TRZ50P080FTC
*	11	Polyethylene Bag	CEG-158
	12	Handle	CNC5395
	13	Holder	CND1249
	14	Holder	CND1250
	15	Bush	CNV3930
	16	Remote Control Unit	See Contrast table(2)
*	17	Battery	See Contrast table(2)
	18	Carton	See Contrast table(2)
	19	Contain Box	See Contrast table(2)
	20	Protector	CHP2663
	21	Protector	CHP2664
	22-1	Owner's Manual	See Contrast table(2)
	22-2	Installation Manual	See Contrast table(2)
*	22-3	Warranty Card	See Contrast table(2)
*	22-4	Card	See Contrast table(2)
	23	Case Assy	CXB3520
	24	Remote Control Assy	See Contrast table(2)
	25	Screw Assy	See Contrast table(2)
*	26	Polyethylene Bag	See Contrast table(2)
*	27	Hexagonal Wrench	See Contrast table(2)
*	28	Screw	See Contrast table(2)
	29	Belt	See Contrast table(2)
	30	Holder Assy	See Contrast table(2)
	31	Holder Assy	See Contrast table(2)
	32	Remote Control Assy	See Contrast table(2)

(2) CONTRAST TABLE

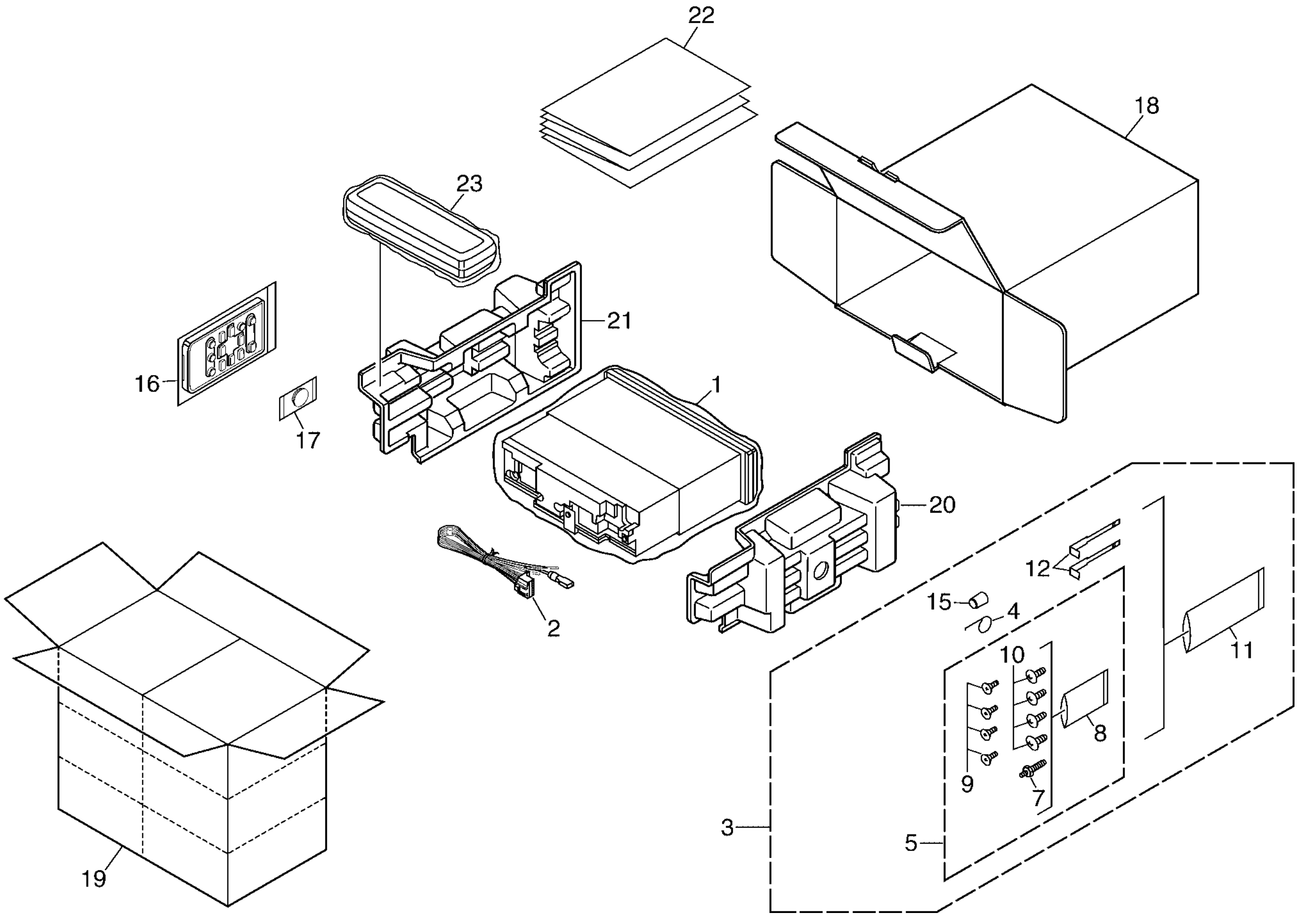
DEH-P550MP/XN/UC and DEH-P5500MP/XN/UC are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No. DEH-P550MP/XN/UC	Part No. DEH-P5500MP/XN/UC
	16	Remote Control Unit	Not used	CXC1265
*	17	Battery	CEX1030	CEX1065
	18	Carton	CHG4942	CHG4943
	19	Contain Box	CHL4942	CHL4943
	22-1	Owner's Manual	CRD3720	CRD3722
	22-2	Installation Manual	CRD3721	CRD3723
*	22-3	Warranty Card	CRY1070	Not used
*	22-4	Card	Not used	ARY1048
	24	Remote Control Assy	CXB9202	Not used
	25	Screw Assy	CZE3169	Not used
*	26	Polyethylene Bag	CEG-127	Not used
*	27	Hexagonal Wrench	CZE3176	Not used
*	28	Screw	RMZ30H060FBK	Not used
	29	Belt	CZN7661	Not used
	30	Holder Assy	CZX3172	Not used
	31	Holder Assy	CZX3173	Not used
	32	Remote Control Assy	CZX3257	Not used

● Owner's Manual, Installation Manual

Model	Part No.	Language
DEH-P550MP/XN/UC	CRD3720	English, French, Spanish
	CRD3721	
DEH-P5500MP/XN/UC	CRD3722	English, French, Spanish
	CRD3723	

2.2 PACKING(DEH-P5550MP/XN/ES)



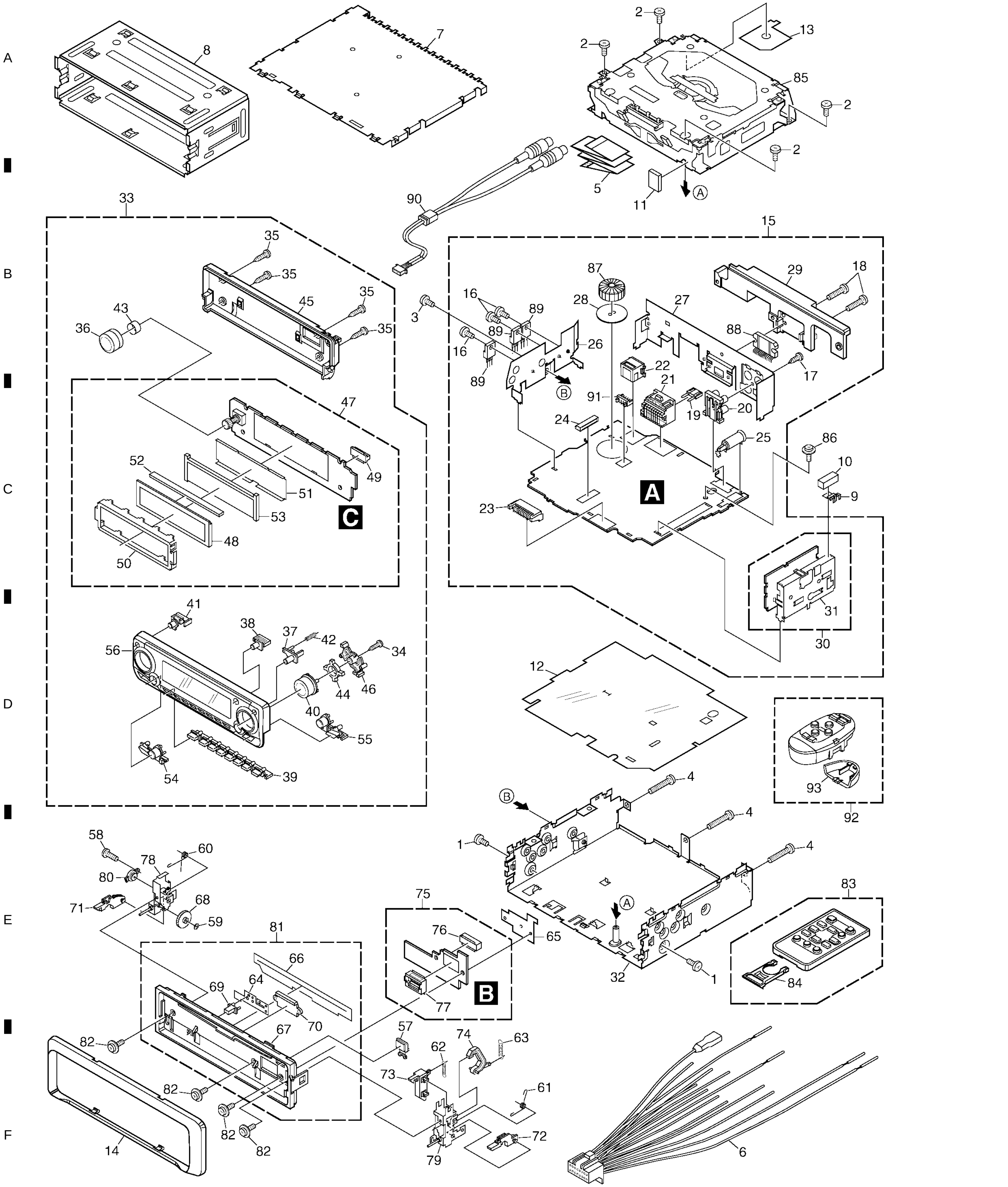
● PACKING(DEH-P5550MP/XN/ES) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Polyethylene Bag	CEG-162
	2	Cord Assy	CDE7154
	3	Accessory Assy	CEA3439
	4	Spring	CBH1650
	5	Screw Assy	CEA3849
	6	•••••	
	7	Screw	CBA1650
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P090FTC
	10	Screw	TRZ50P080FTC
*	11	Polyethylene Bag	CEG-158
	12	Handle	CNC5395
	13	•••••	
	14	•••••	
	15	Bush	CNV3930
	16	Remote Control Unit	CXC1265
*	17	Battery	CEX1065
	18	Carton	CHG4944
	19	Contain Box	CHL4944
	20	Protector	CHP2663
	21	Protector	CHP2664
	22-1	Owner's Manual	CRD3724
	22-2	Owner's Manual	CRD3725
	22-3	Installation Manual	CRD3726
	23	Case Assy	CXB3520

● Owner's Manual, Installation Manual

Model	Part No.	Language
DEH-P5550MP/XN/ES	CRD3724	English, Spanish, Portuguese(B)
	CRD3725	Traditional Chinese, Arabic
	CRD3726	English, Spanish, Portuguese(B) Traditional Chinese, Arabic

2.3 EXTERIOR


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(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Cable	CDE7065
	6	Cord Assy	CDE7154
	7	Case	CNB2870
	8	Holder	CNC8659
	9	Earth Plate	CNC8915
	10	Cushion	CNM4870
	11	Insulator	CNM7682
	12	Insulator	CNM7935
	13	Insulator	CNM8174
	14	Panel	See Contrast table(2)
	15	Tuner Amp Unit	See Contrast table(2)
	16	Screw	ASZ26P060FTC
	17	Screw	BPZ26P080FTC
	18	Screw	BSZ26P160FTC
	19	Fuse(10A)	CEK1208
	20	Pin Jack(CN352)	CKB1051
	21	Plug(CN901)	CKM1376
	22	Connector(CN101)	CKS3408
	23	Plug(CN801)	CKS3537
	24	Connector(CN651)	CKS3837
	25	Antenna Jack(CN401)	CKX1056
	26	Holder	CND1352
	27	Holder	See Contrast table(2)
	28	Insulator	CNM8245
	29	Heat Sink	CNR1668
	30	FM/AM Tuner Unit	CWE1646
	31	Holder	CND1054
	32	Chassis Unit	CXB9528
	33	Detach Grille Assy	See Contrast table(2)
	34	Screw	BPZ20P060FTC
	35	Screw	BPZ20P100FZK
	36	Knob	See Contrast table(2)
	37	Button(OPEN)	CAC7728
	38	Button(AUDIO)	CAC7729
	39	Button(DISP, 1-6, FUNC)	CAC7730
	40	Button(SELECT)	See Contrast table(2)
	41	Button(CLK)	CAC7751
	42	Spring	CBH2654
	43	Spring	CBL1470
	44	Cushion	CNM8291
	45	Cover	CNS7247

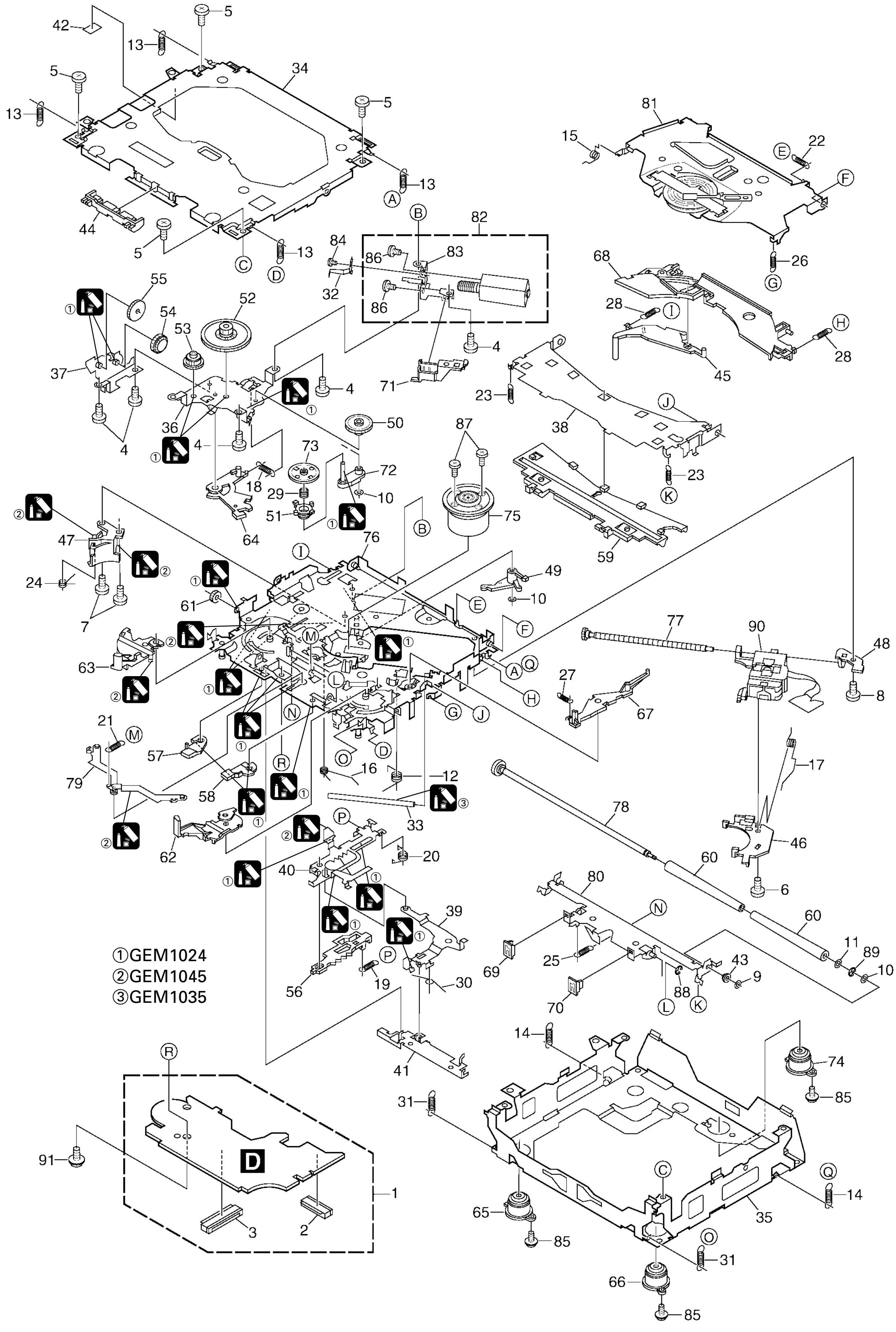
Mark	No.	Description	Part No.
	46	Holder	CNV7405
	47	Keyboard Unit	CWM8605
	48	LCD	CAW1755
	49	Connector(CN1901)	CKS4524
	50	Holder	CND1215
	51	Sheet	CNM7921
	52	Connector	CNV7365
	53	Lighting Conductor	CNV7406
	54	Button Unit(SRC, EQ)	CXB9924
	55	Button Unit(BAND, EQ-EX)	CXB9925
	56	Sub Grille Assy	See Contrast table(2)
	57	Button(EJECT)	CAC7752
	58	Screw(M2x4)	CBA1649
	59	Washer	CBF1038
	60	Spring	CBH2650
	61	Spring	CBH2651
	62	Spring	CBH2652
	63	Spring	CBH2653
	64	Spring	CBL1512
	65	Holder	CND1254
	66	Cover	CNM6854
	67	Panel	CNS7245
	68	Gear	CNV5997
	69	Pin	CNV6486
	70	Lighting Conductor	CNV6487
	71	Arm	CNV7400
	72	Arm	CNV7401
	73	Arm	CNV7402
	74	Arm	CNV7403
	75	Panel Unit	CWM8758
	76	Socket(CN1950)	CKS3550
	77	Connector(CN1951)	CKS4462
	78	Holder Unit	CXB9501
	79	Holder Unit	CXB9502
	80	Damper Unit	CXB9503
	81	Service Panel Unit	CXX1691
	82	Screw	IMS20P045FZK
	83	Remote Control Unit	See Contrast table(2)
	84	Cover	See Contrast table(2)
	85	CD Mechanism Module(S10MP3)	CXK5661
	86	Screw	ISS26P055FTC
	87	Choke Coil(L301)	CTH1280
	88	IC(IC301)	PAL007A
	89	Transistor(Q651, 911, 921)	2SD2396
	90	Cord Assy	See Contrast table(2)
	91	Plug(CN351)	See Contrast table(2)
	92	Remote Control Assy	See Contrast table(2)
	93	Cover	See Contrast table(2)

(2) CONTRAST TABLE

DEH-P550MP/XN/UC, DEH-P5500MP/XN/UC and DEH-P5550MP/XN/ES are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.		
			DEH-P550MP/XN/UC	DEH-P5500MP/XN/UC	DEH-P5550MP/XN/ES
	14	Panel	CNS6935	CNS6934	CNS6935
	15	Tuner Amp Unit	CWM8588	CWM8589	CWM8590
	27	Holder	CND1239	CND1477	CND1477
	33	Detach Grille Assy	CXB9672	CXB9673	CXB9674
	36	Knob	CAA2755	CAA2753	CAA2755
	40	Button(SELECT)	CAC7733	CAC7731	CAC7733
	56	Sub Grille Assy	CXB9971	CXB9972	CXB9973
	83	Remote Control Unit	Not used	CXC1265	CXC1265
	84	Cover	Not used	CNS7068	CNS7068
	90	Cord Assy	CDE7129	Not used	Not used
	91	Plug(CN351)	CKS1238	Not used	Not used
	92	Remote Control Assy	CZX3257	Not used	Not used
	93	Cover	CZN7655	Not used	Not used

2.4 CD MECHANISM MODULE

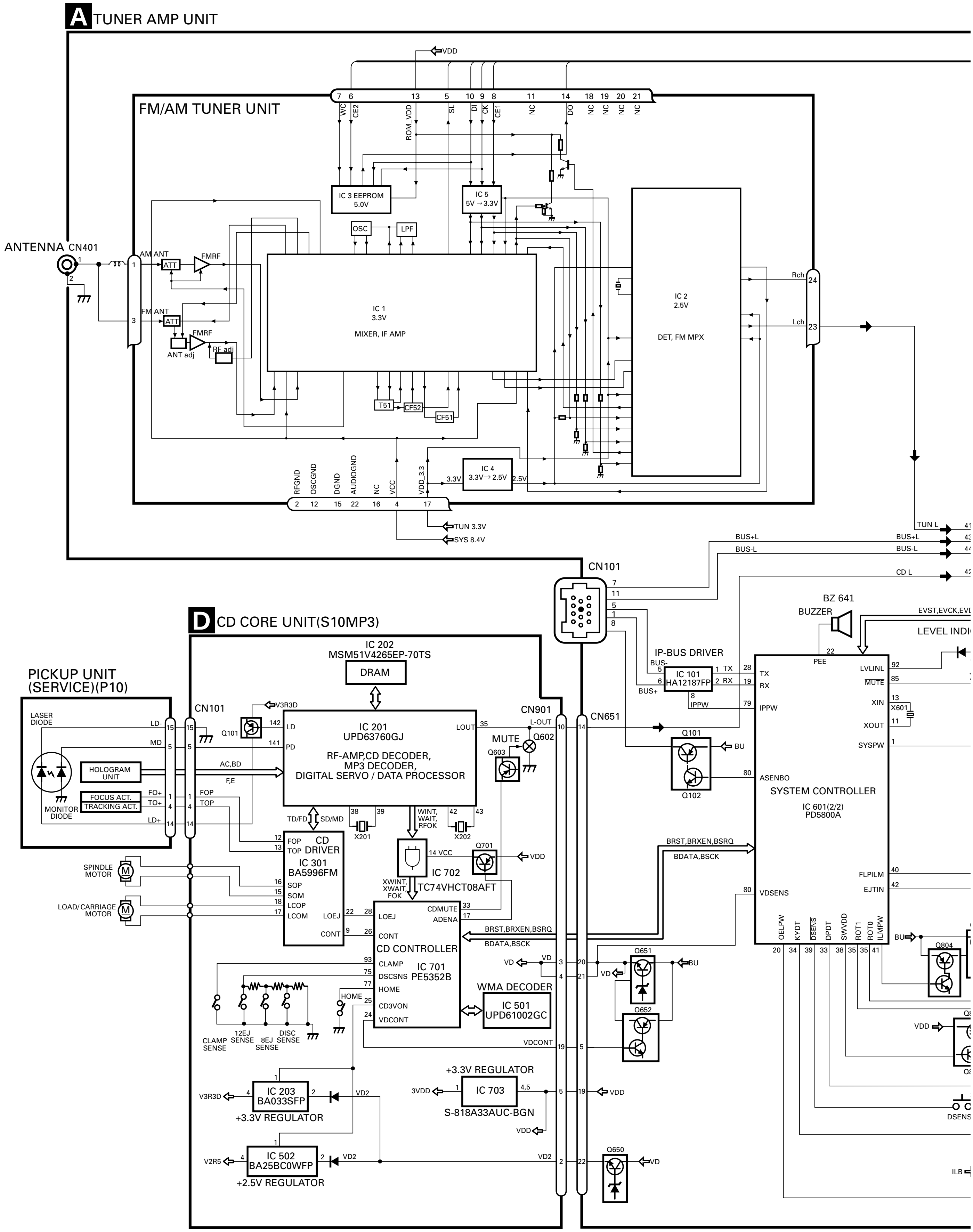


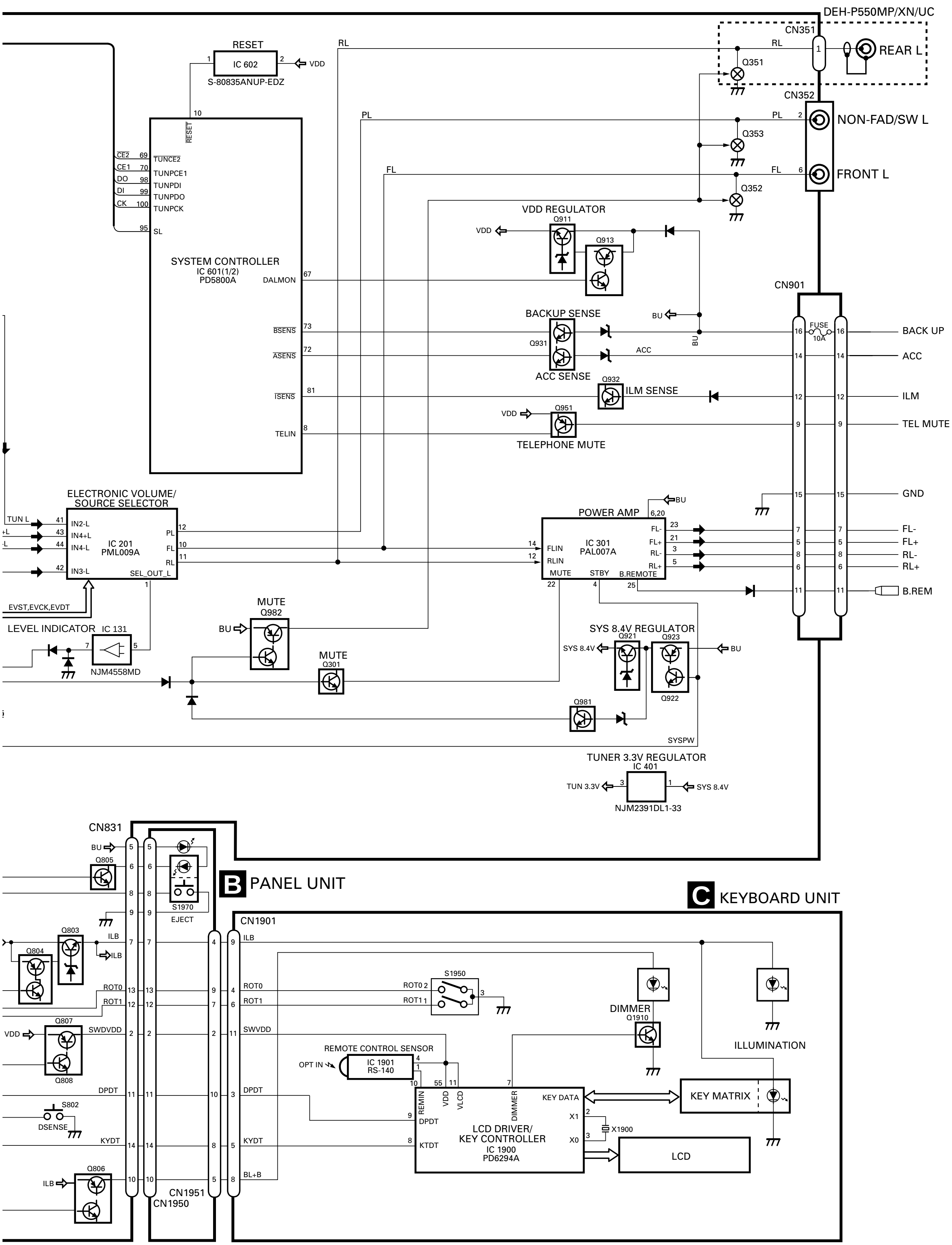
● CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S10MP3)	CWX2743
	2	Connector(CN101)	CKS4182
	3	Connector(CN901)	CKS4017
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x3)	CBA1511
	8	Screw(M2x3)	CBA1527
	9	Washer	CBF1037
	10	Washer	CBF1038
	11	Washer	CBF1060
	12	Spring	CBH2390
	13	Spring	CBH2606
	14	Spring	CBH2607
	15	Spring	CBH2608
	16	Spring	CBH2609
	17	Spring	CBH2610
	18	Spring	CBH2611
	19	Spring	CBH2612
	20	Spring	CBH2613
	21	Spring	CBH2614
	22	Spring	CBH2615
	23	Spring	CBH2616
	24	Spring	CBH2617
	25	Spring	CBH2620
	26	Spring	CBH2621
	27	Spring	CBH2641
	28	Spring	CBH2642
	29	Spring	CBH2643
	30	Spring	CBH2659
	31	Spring	CBH2688
*	32	Spring	CBL1614
	33	Shaft	CLA3845
	34	Frame	CNC9962
	35	Frame	CNC9963
	36	Bracket	CNC9966
	37	Bracket	CNC9967
	38	Arm	CNC9968
	39	Arm	CNC9973
	40	Lever	CNC9983
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV6906
	44	Guide	CNV6925
	45	Arm	CNV7198
	46	Rack	CNV7199
	47	Holder	CNV7201
	48	Holder	CNV7202
	49	Arm	CNV7203
	50	Gear	CNV7207
	51	Gear	CNV7208
	52	Gear	CNV7209
	53	Gear	CNV7210
	54	Gear	CNV7211
	55	Gear	CNV7212
	56	Rack	CNV7214
	57	Arm	CNV7215
	58	Arm	CNV7216
	59	Guide	CNV7217
	60	Roller	CNV7218
	61	Gear	CNV7219
	62	Arm	CNV7221
	63	Arm	CNV7220
	64	Arm	CNV7222
	65	Damper	CNV7313
	66	Damper	CNV7314
	67	Arm	CNV7341
	68	Arm	CNV7342
	69	Guide	CNV7360
	70	Guide	CNV7361
	71	Holder	CNV7437
	72	Arm	CNV7444
	73	Gear	CNV7595
	74	Damper	CNV7618
	75	Motor Unit(M1)	CXB6007
	76	Chassis Unit	CXB8728
	77	Screw Unit	CXB8729
	78	Gear Unit	CXB8731
	79	Arm Unit	CXB8732
	80	Arm Unit	CXB8735
	81	Arm Unit	CXB8852
	82	Motor Unit(M2)	CXB8933
	83	Bracket	CNC9985
	84	Screw	JFZ20P020FTC
	85	Screw(M2x5)	EBA1028
	86	Screw	JFZ20P020FTC
	87	Screw	JGZ17P022FTC
	88	Washer	YE15FTC
	89	Washer	YE20FTC
	90	Pickup Unit(Service)(P10)	CXX1641
	91	Screw	IMS26P030FMC

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

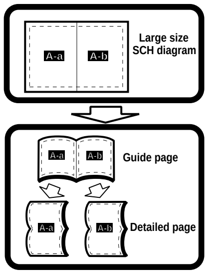
3.1 BLOCK DIAGRAM

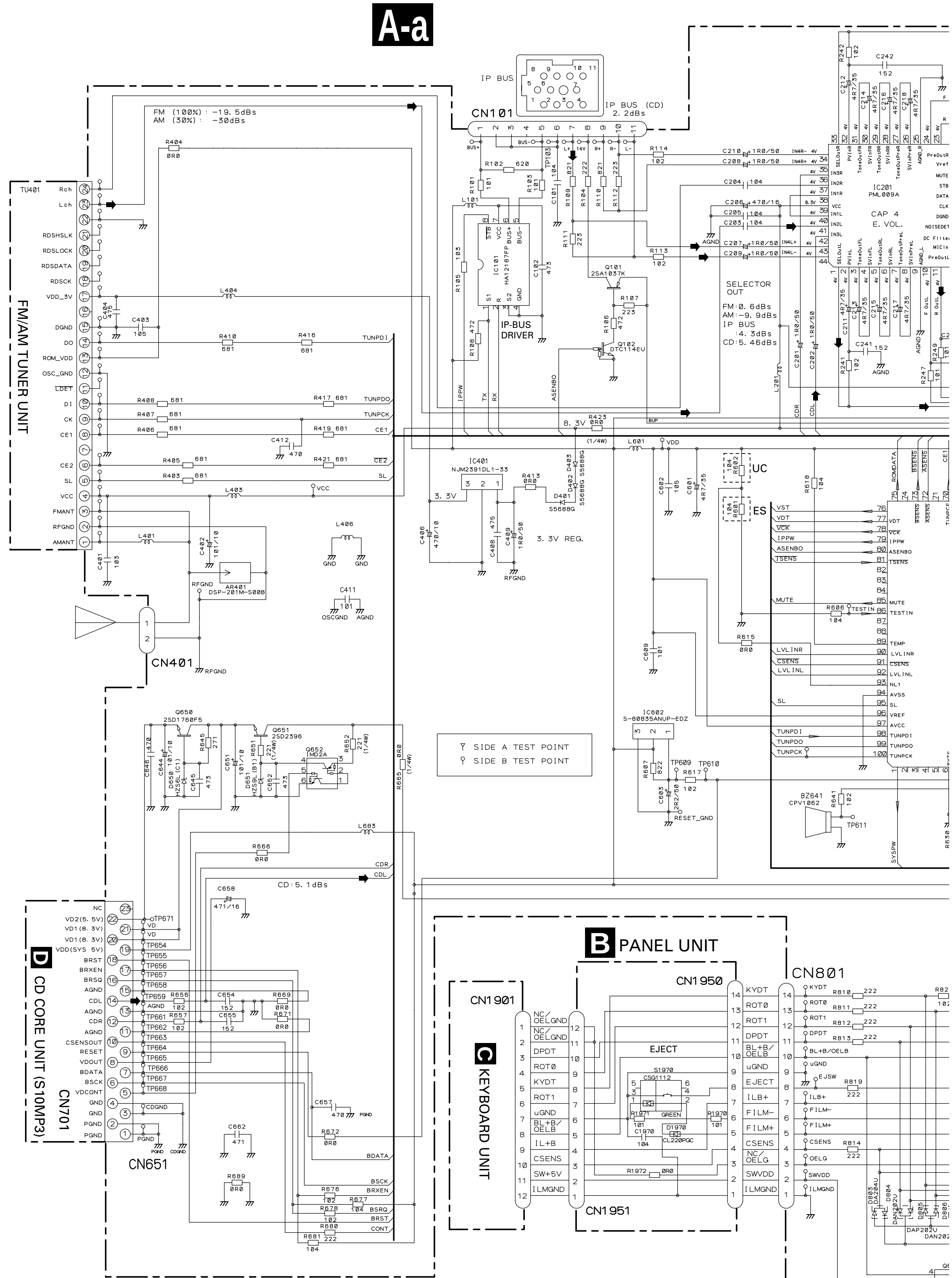



DEH-P550MP/XN/UC
CN351
REAR L
Q351
CN352
NON-FAD/SW L
Q353
FRONT L
Q352
RESET
IC 602
S-80835ANUP-EDZ
VDD
SYSTEM CONTROLLER
IC 601(1/2)
PD5800A
TUNCE2
TUNPCE1
TUNPDI
TUNPDO
TUNPCK
SL
DALMON
BSENS
ASENS
ISENS
TELIN
VDD REGULATOR
Q911
Q913
BACKUP SENSE
Q931
ACC SENSE
Q932
ILM SENSE
Q951
TELEPHONE MUTE
CN901
FUSE 10A
BACK UP
ACC
ILM
TEL MUTE
GND
FL-
FL+
RL-
RL+
B.REM
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC 201
PML009A
SEL_OUT_L
EVST,EVCK,EVDT
POWER AMP
IC 301
PAL007A
FLIN
RLIN
MUTE
STBY
B.REMOTE
LEVEL INDICATOR
IC 131
NJM4558MD
MUTE
Q982
MUTE
Q301
SYS 8.4V REGULATOR
Q921
Q923
Q922
Q981
SYSPW
TUNER 3.3V REGULATOR
IC 401
NJM2391DL1-33
TUN 3.3V
SYS 8.4V
CN831
Q805
Q803
Q804
Q807
Q808
S802
DSENSE
Q806
S1970
EJECT
CN1951
CN1950
B PANEL UNIT
C KEYBOARD UNIT
CN1901
ILB
ROT0
ROT1
SWVDD
DPDT
KYDT
BL+B
S1950
DIMMER
Q1910
ILLUMINATION
REMOTE CONTROL SENSOR
OPT IN
IC 1901
RS-140
LCD DRIVER/
KEY CONTROLLER
IC 1900
PD6294A
REMIN
VDD
VLCD
DIMMER
KEY DATA
X1
X0
X1900
KEY MATRIX
LCD

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to “EXPLODED VIEWS AND PARTS LIST” or “ELECTRICAL PARTS LIST”.





For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

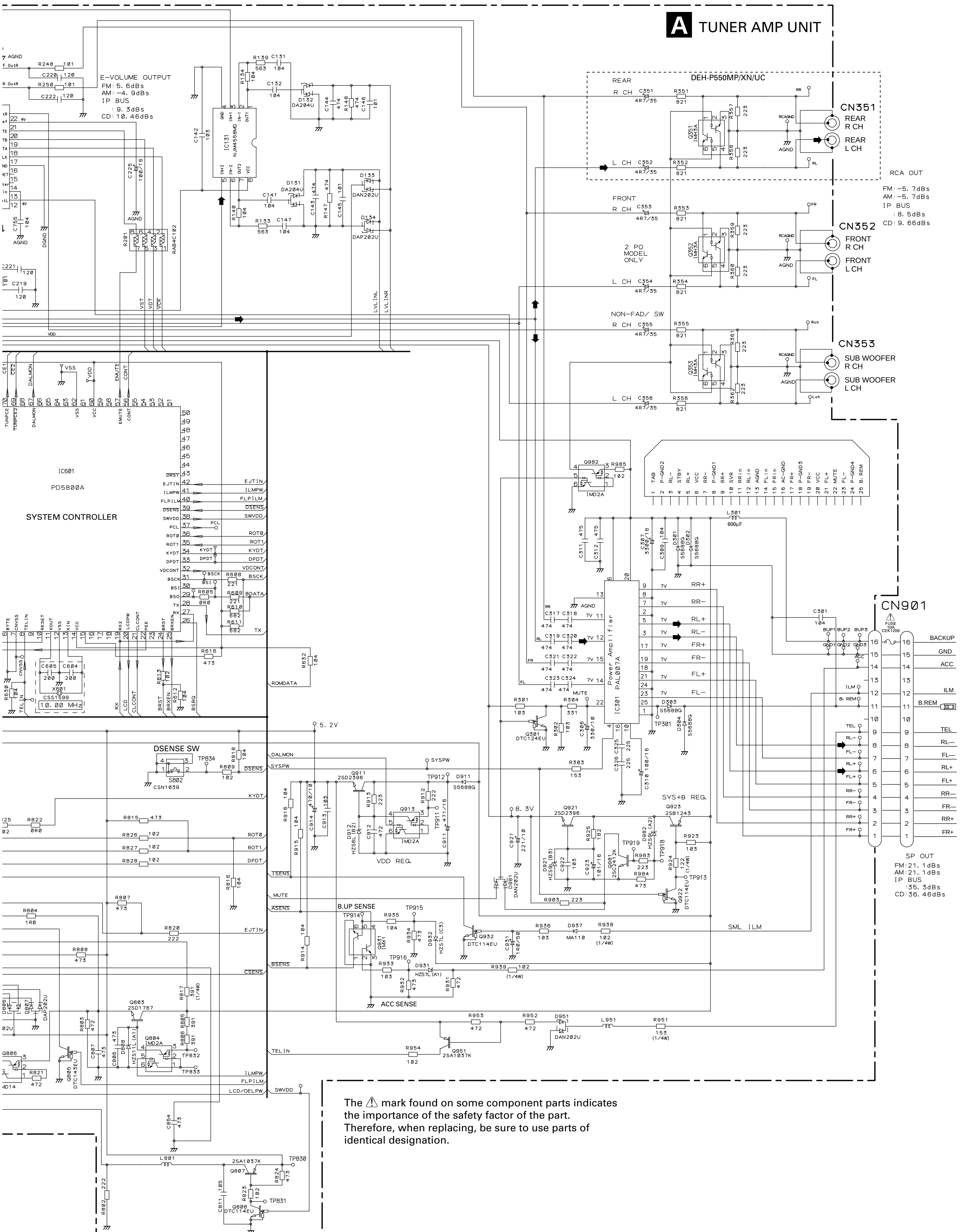
Ex. *Resistors

Code	Practical value
123	12k ohms
103	10k ohms

*Capacitors

Code	Practical value
103	0.01uF
101/10	100uF/10V

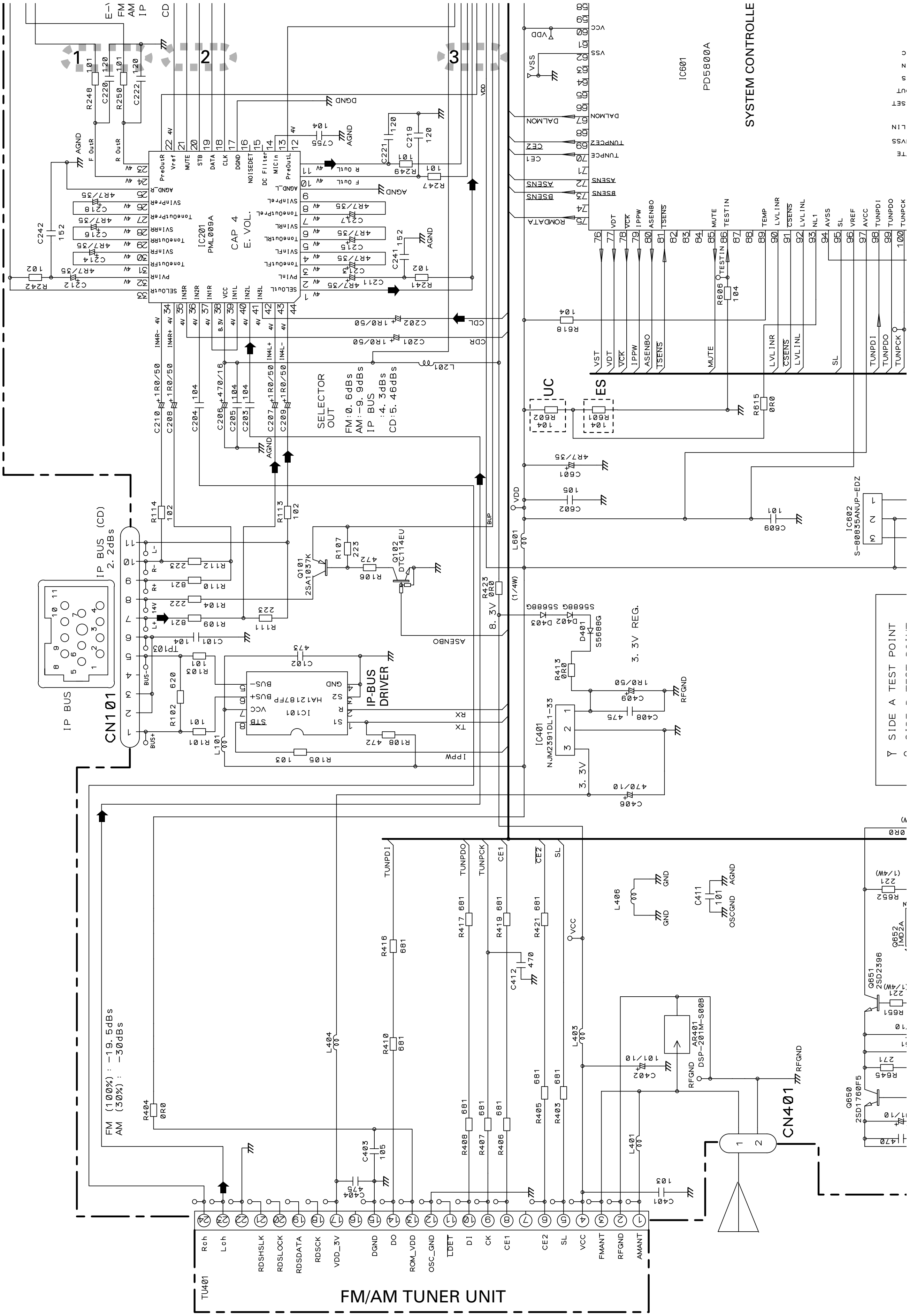
A-b



The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

1 2 3 4

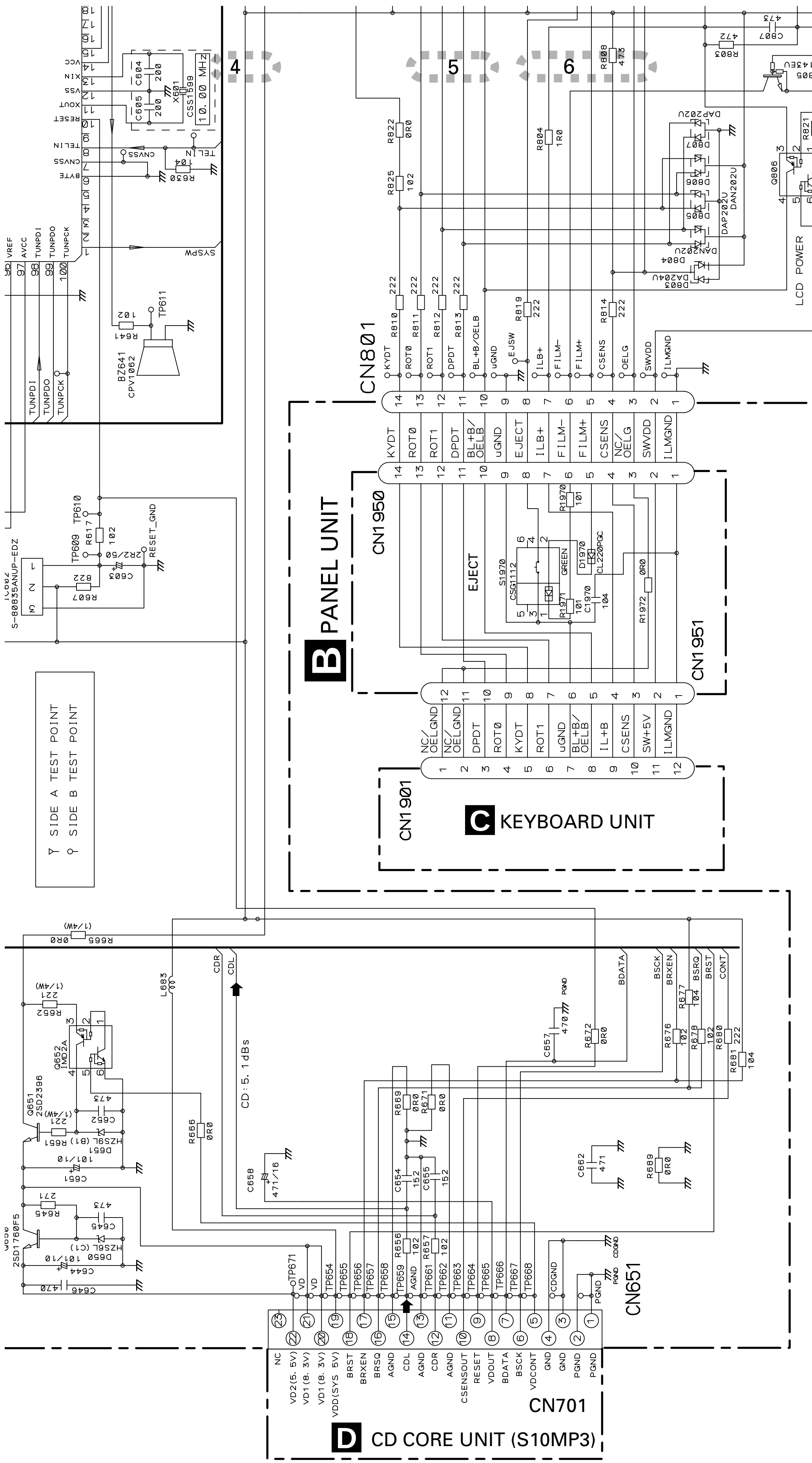
A-b



A B C D E F

A-b
A-a

A-a



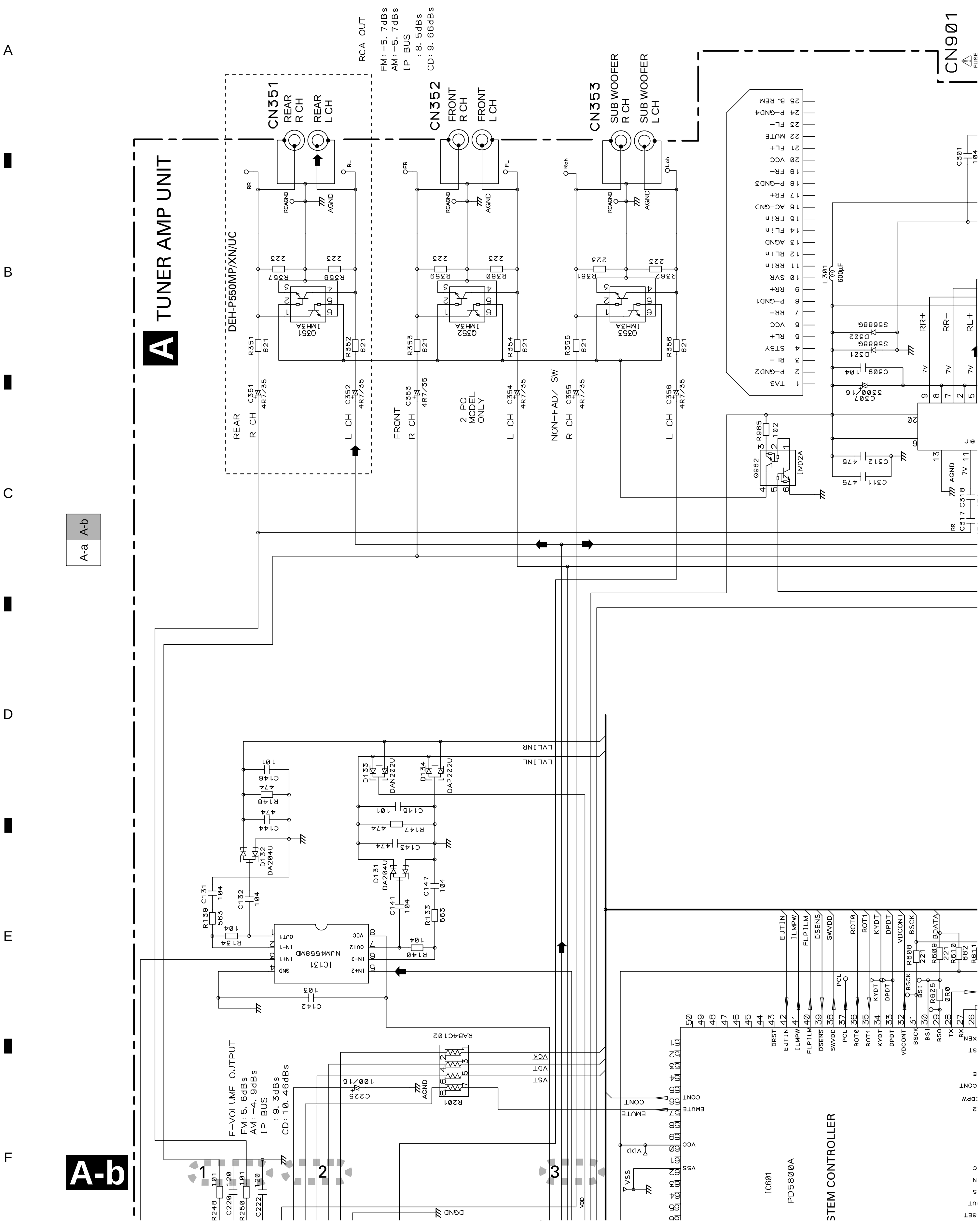
For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

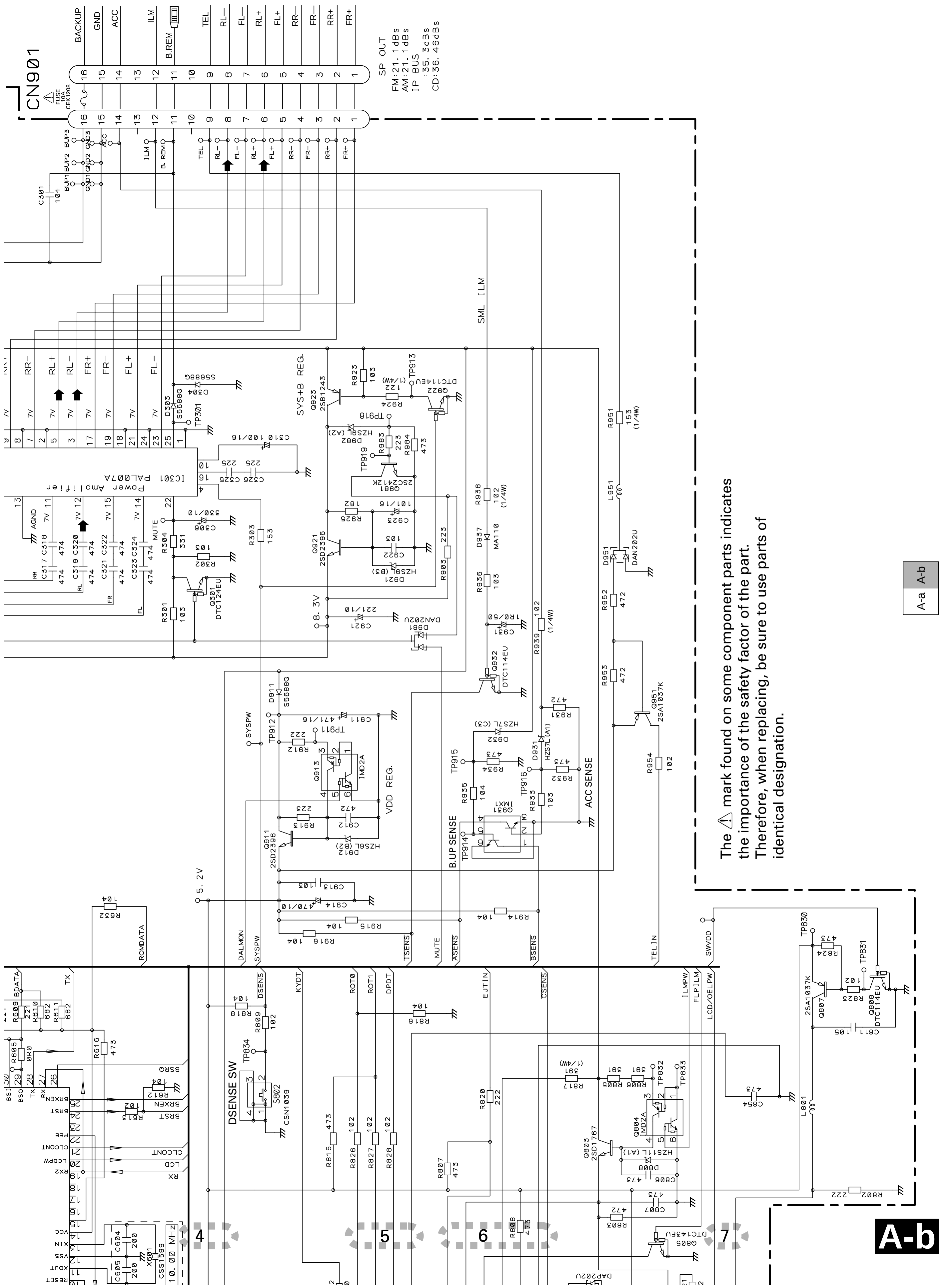
Ex. *Resistors

Code	Practical value
123	12k ohms
103	10k ohms

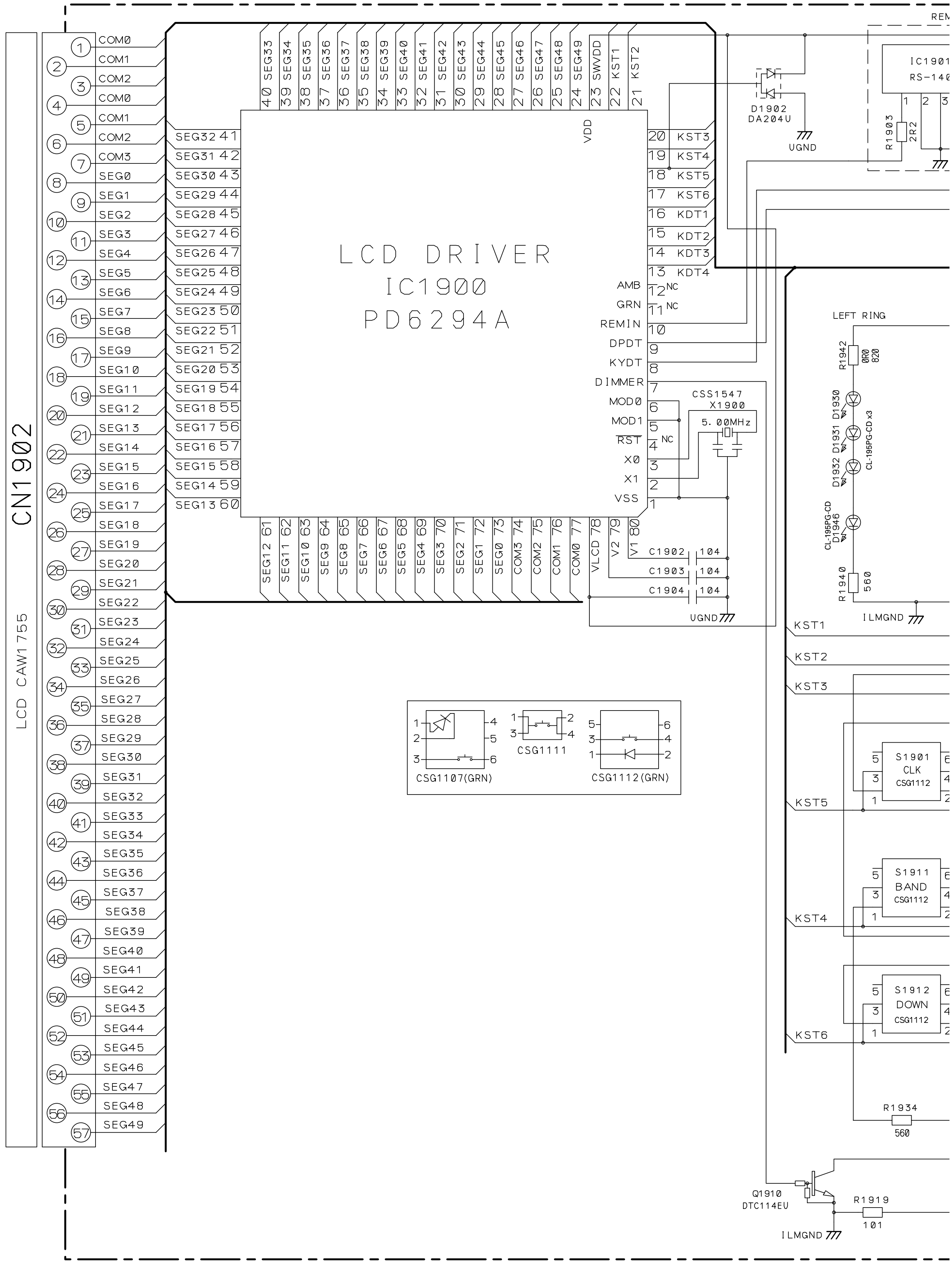
*Capacitors

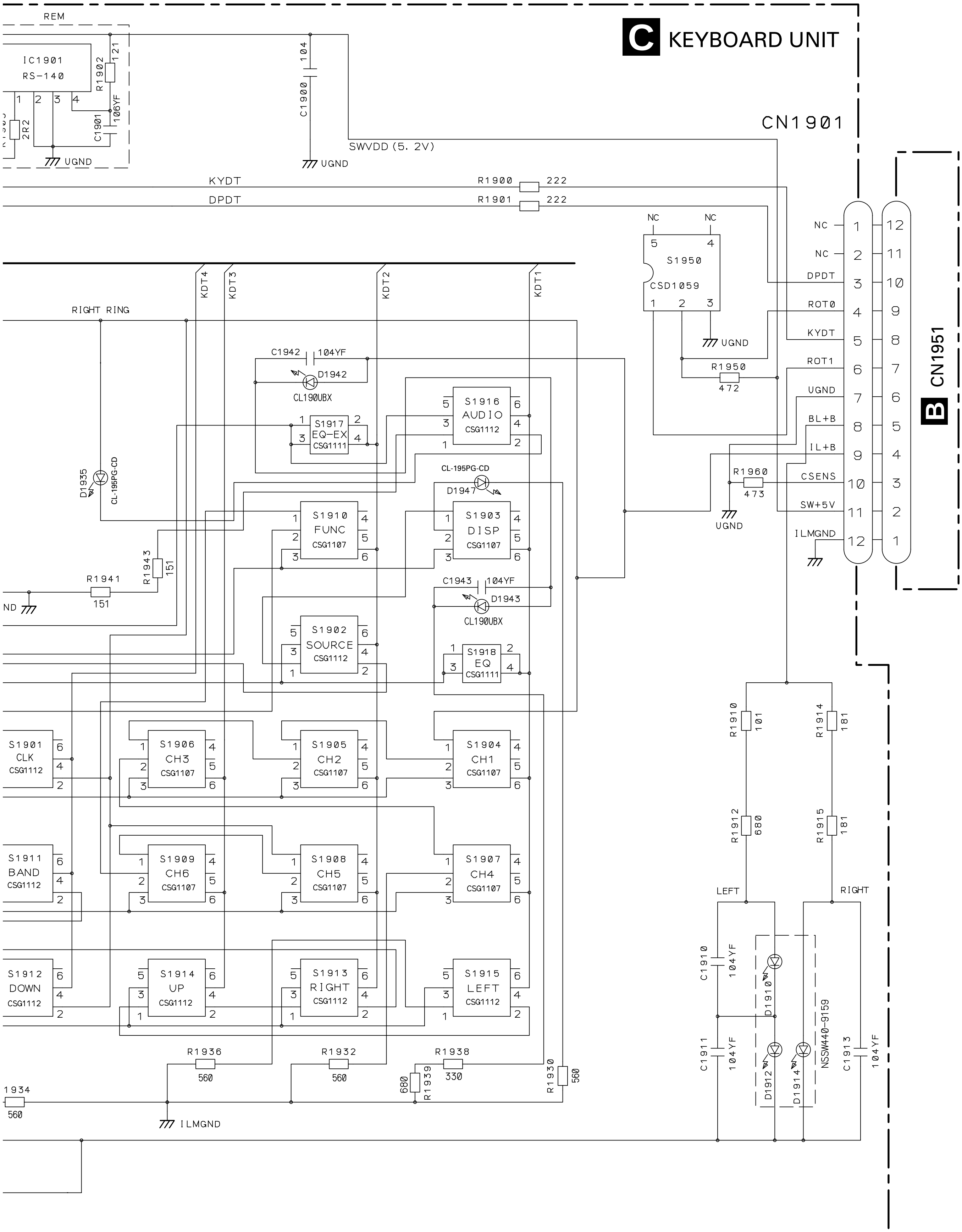
Code	Practical value
103	0.01uF
101/10	100uF/10V


A TUNER AMP UNIT
DEH-P550MP/XN/UC
RCA OUT
FM: -5. 7dBs
AM: -5. 7dBs
IP BUS : 8. 5dBs
CD: 9. 66dBs
CN351 REAR R CH REAR L CH
CN352 FRONT R CH FRONT L CH
CN353 SUB WOOFER R CH SUB WOOFER L CH
CN901
Q351 IMH3A
Q352 IMH3A
Q353 IMH3A
REAR R CH
FRONT R CH
2 PO MODEL ONLY
NON-FAD/ SW
Q982 IMD2A
IC131 NJM4558MD
E-VOLUME OUTPUT
FM: 5. 6dBs
AM: -4. 9dBs
IP BUS : 9. 3dBs
CD: 10. 46dBs
IC601 PD5800A
SYSTEM CONTROLLER
A-b
A-a

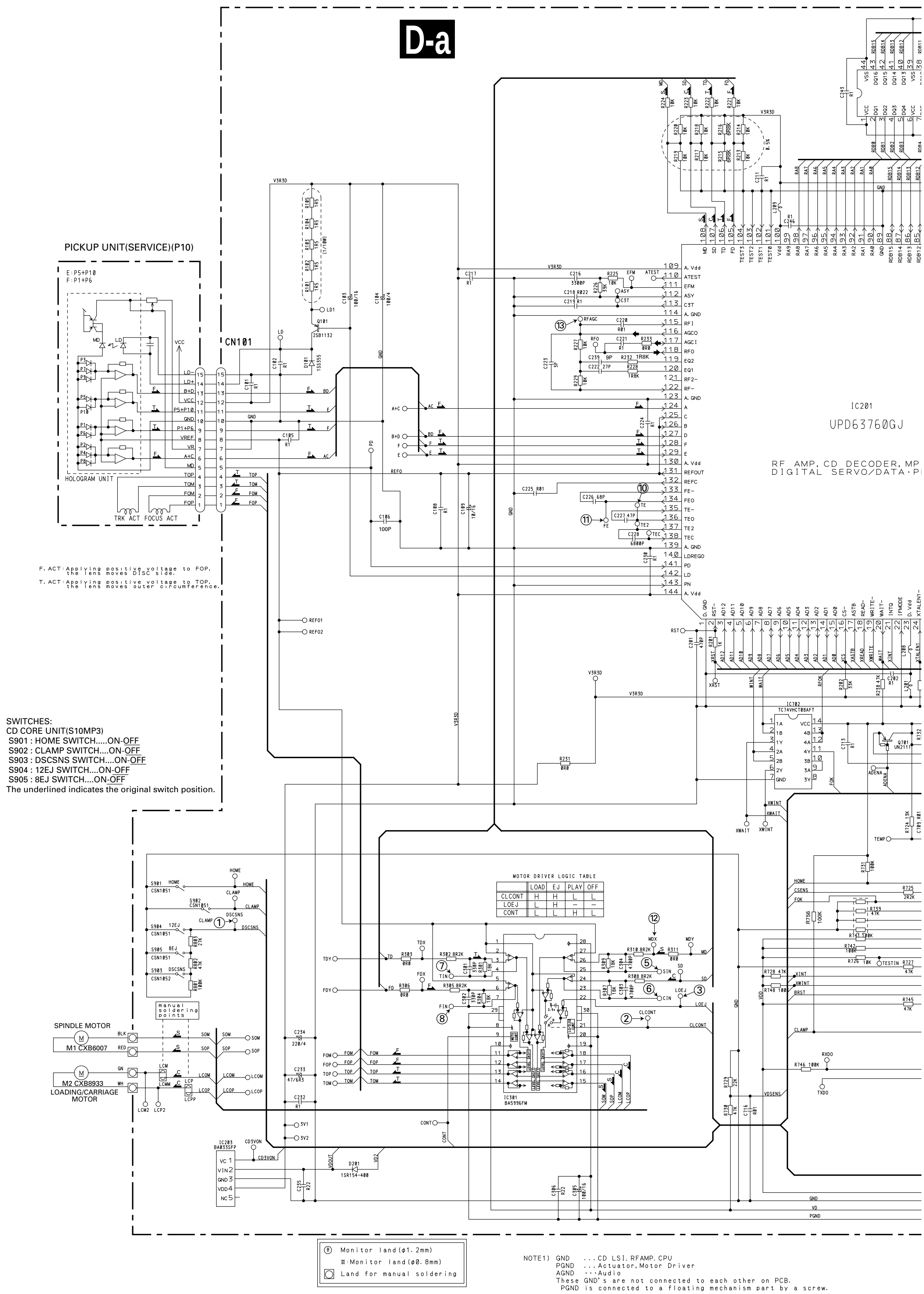

A-b
CN901
IC301 PAL007A Power Amplifier
SYS+B REG.
VDD REG.
B.UP SENSE
ACC SENSE
DSENSE SW
SML ILM
SP OUT
FM:21.1dBs
AM:21.1dBs
IP BUS :35.3dBs
CD:36.46dBs
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

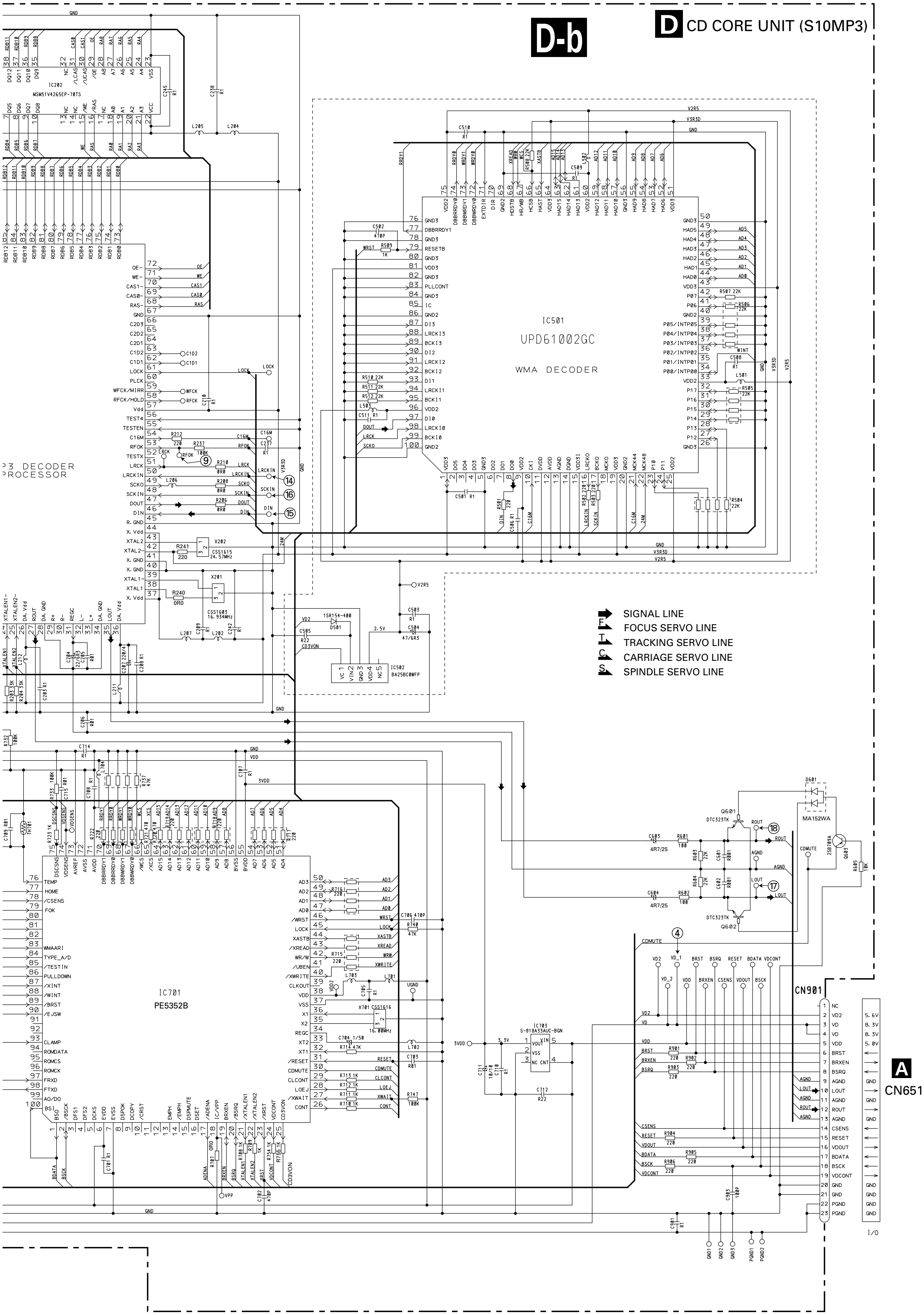
3.3 KEYBOARD UNIT




C KEYBOARD UNIT
CN1901
B CN1951
IC1901
RS-140
REM
R1902 121
C1901 106YF
2R2
UGND
C1900 104
SWVDD (5. 2V)
KYDT
DPDT
R1900 222
R1901 222
S1950
CSD1059
NC
R1950 472
R1960 473
ROT0
ROT1
BL+B
IL+B
CSENS
SW+5V
ILMGND
KDT1
KDT2
KDT3
KDT4
RIGHT RING
C1942 104YF
D1942
CL190UBX
S1917 EQ-EX CSG1111
S1916 AUDIO CSG1112
D1935 CL-195PG-CD
D1947 CL-195PG-CD
S1910 FUNC CSG1107
S1903 DISP CSG1107
R1943 151
R1941 151
C1943 104YF
D1943 CL190UBX
S1902 SOURCE CSG1112
S1918 EQ CSG1111
S1901 CLK CSG1112
S1906 CH3 CSG1107
S1905 CH2 CSG1107
S1904 CH1 CSG1107
S1911 BAND CSG1112
S1909 CH6 CSG1107
S1908 CH5 CSG1107
S1907 CH4 CSG1107
S1912 DOWN CSG1112
S1914 UP CSG1112
S1913 RIGHT CSG1112
S1915 LEFT CSG1112
R1936 560
R1932 560
R1938 330
R1939 680
R1930 560
1934 560
R1910 101
R1912 680
R1914 181
R1915 181
LEFT
RIGHT
C1910 104YF
C1911 104YF
C1913 104YF
D1910
D1912
D1914
NSSW440-9159

3.4 CD MECHANISM MODULE(GUIDE PAGE)




D-b
D CD CORE UNIT (S10MP3)
IC501
UPD61002GC
WMA DECODER
IC202
MSM51V4265EP-70TS
IC701
PE5352B
IC502
BA25BC0WFP
IC703
S-818A33AUC-BGN
3 DECODER
PROCESSOR
SIGNAL LINE
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE
CN901
A
CN651
D601
MA152WA
Q601
DTC523TK
Q602
DTC523TK
Q603
2SD1760A
X201
CSS1603
16.934MHz
X202
CSS1615
24.57MHz
X701 CSS1616
16.00MHz
D501
1SR154-400

A B C D E F

D-b

A

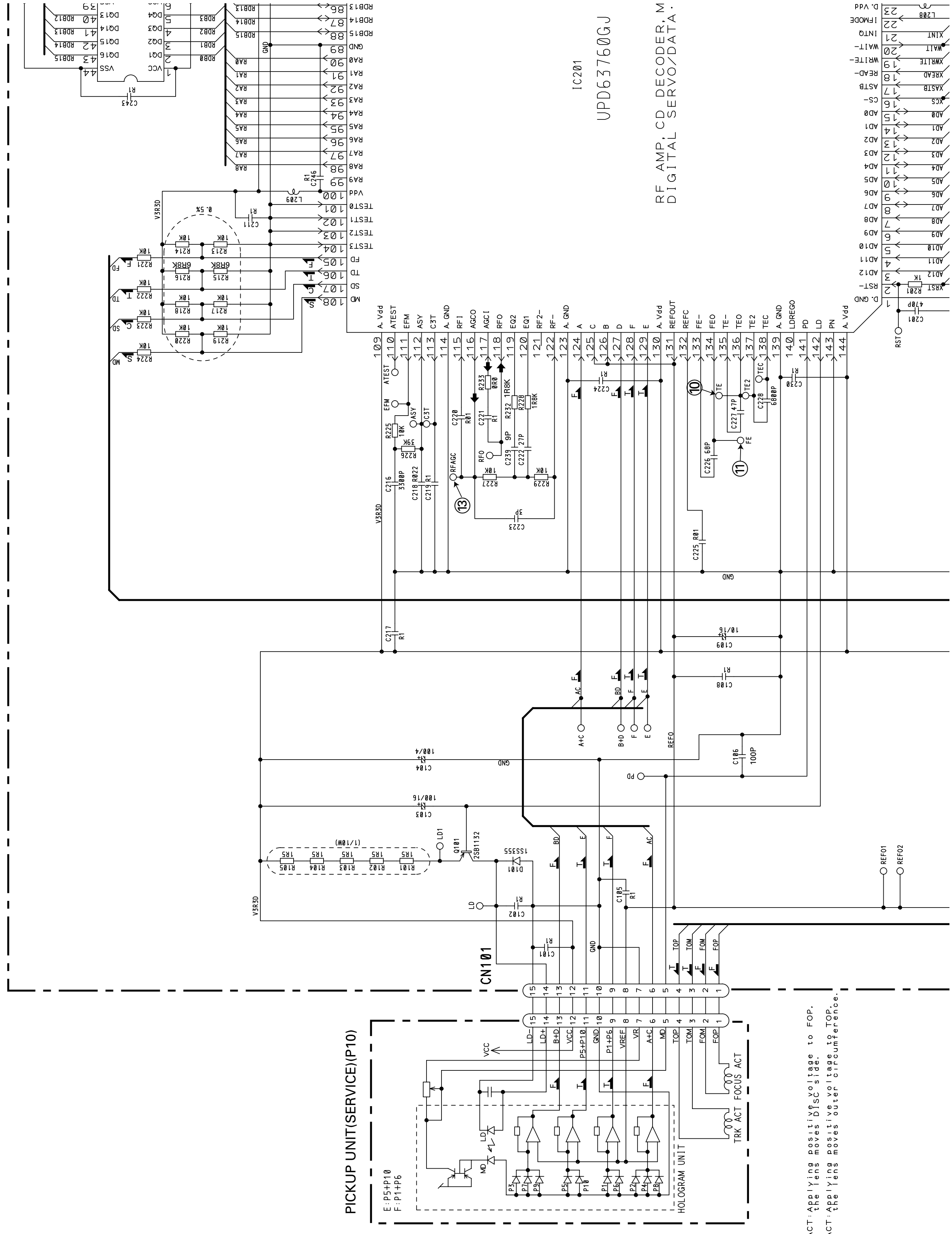
B

C

D

E

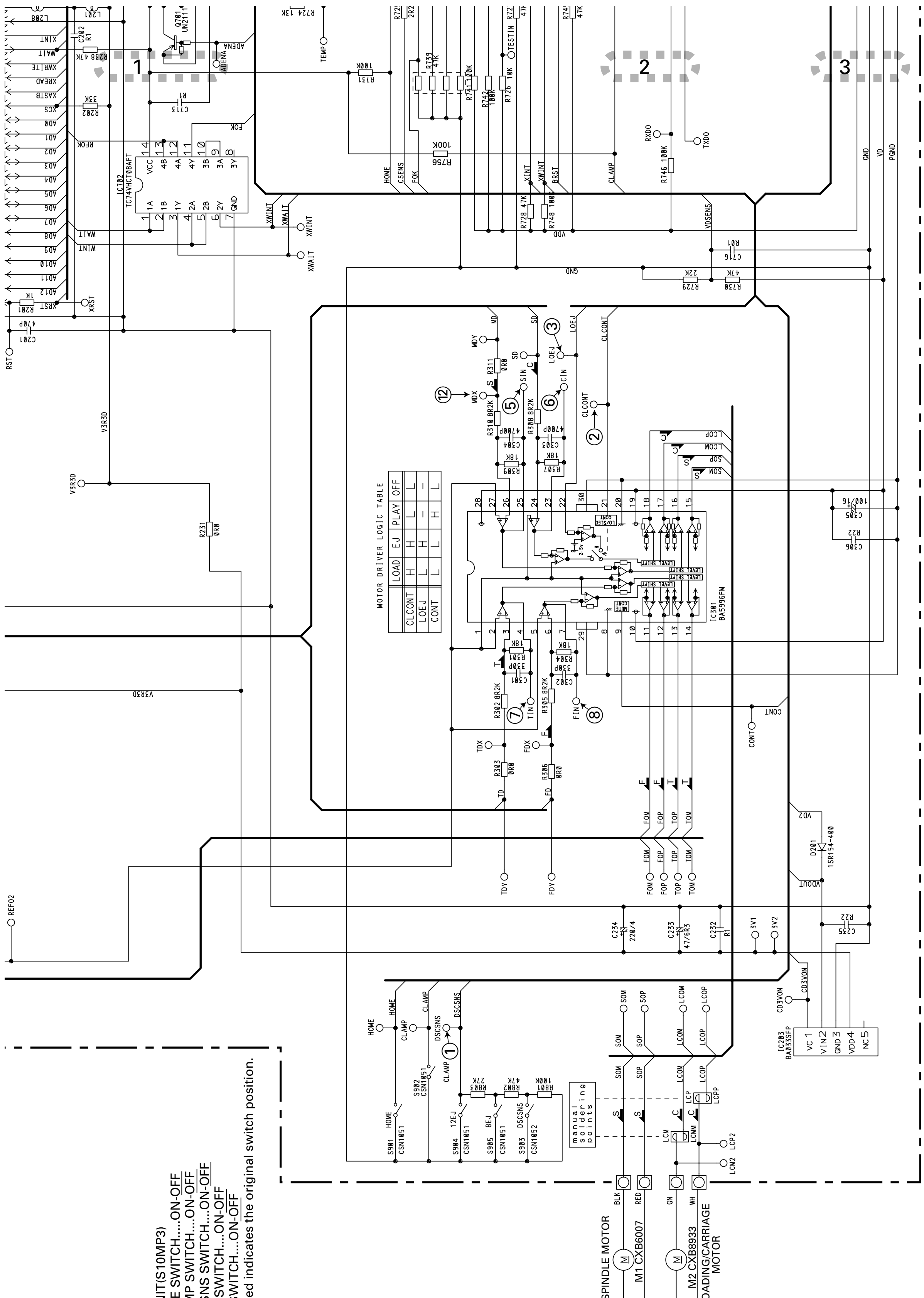
F



D-b
D-a

D-a

D-b



MOTOR DRIVER LOGIC TABLE

	LOAD	EJ	PLAY	OFF
CLCONT	H	H	L	L
LOEJ	L	H	-	-
CONT	L	L	H	L

NOTE1) GND ...CD LSI, RFAMP, CPU
PGND ...Actuator, Motor Driver
AGND ...Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.

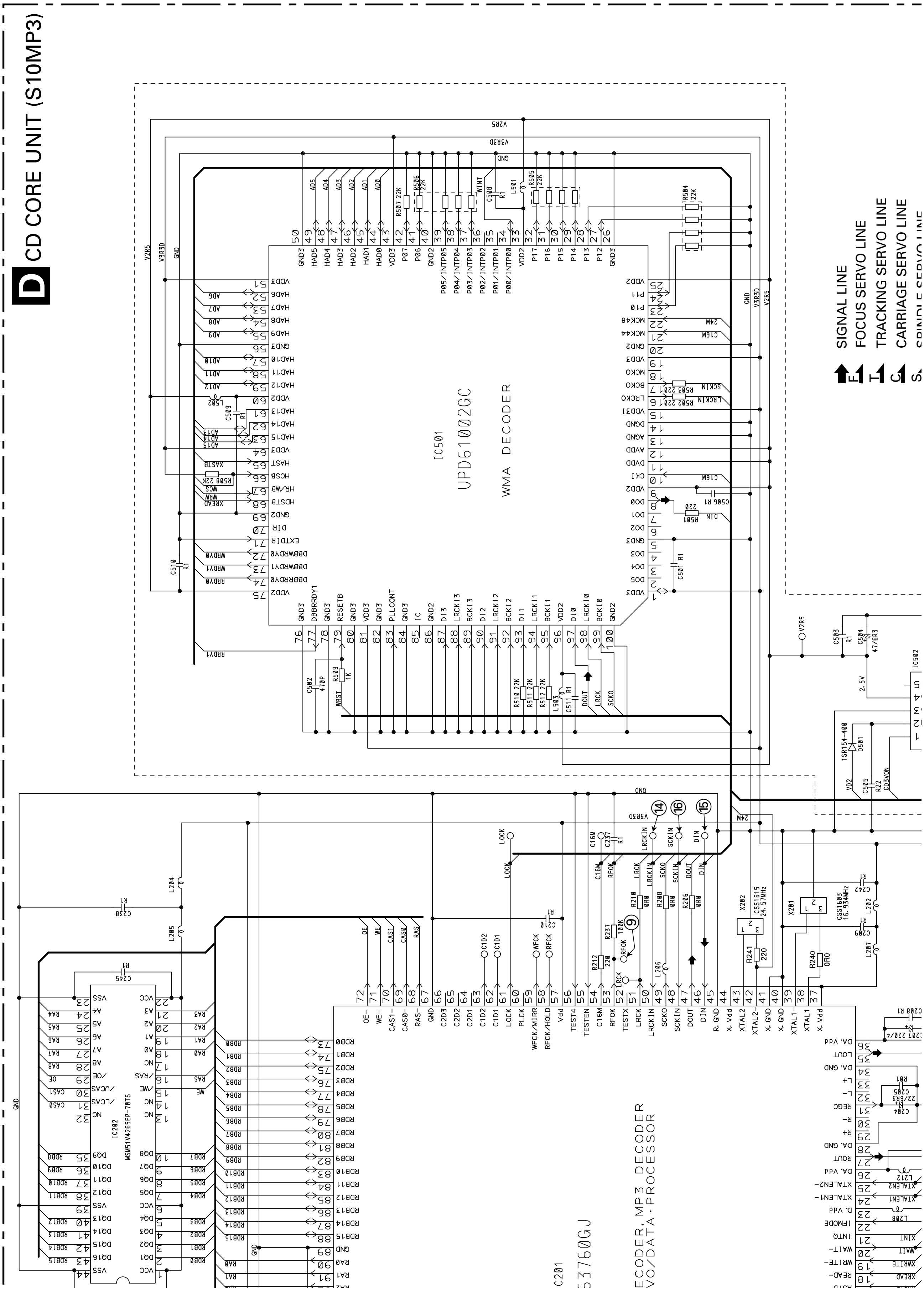
Ⓑ Monitor land (φ1.2mm)
#:Monitor land (φ0.8mm)
Land for manual soldering

SWITCHES:
CD CORE UNIT(S10MP3)
S901 : HOME SWITCH.....ON-OFF
S902 : CLAMP SWITCH....ON-OFF
S903 : DSCSNS SWITCH....ON-OFF
S904 : 12EJ SWITCH....ON-OFF
S905 : 8EJ SWITCH....ON-OFF
The underlined indicates the original switch position.

D-a D-b

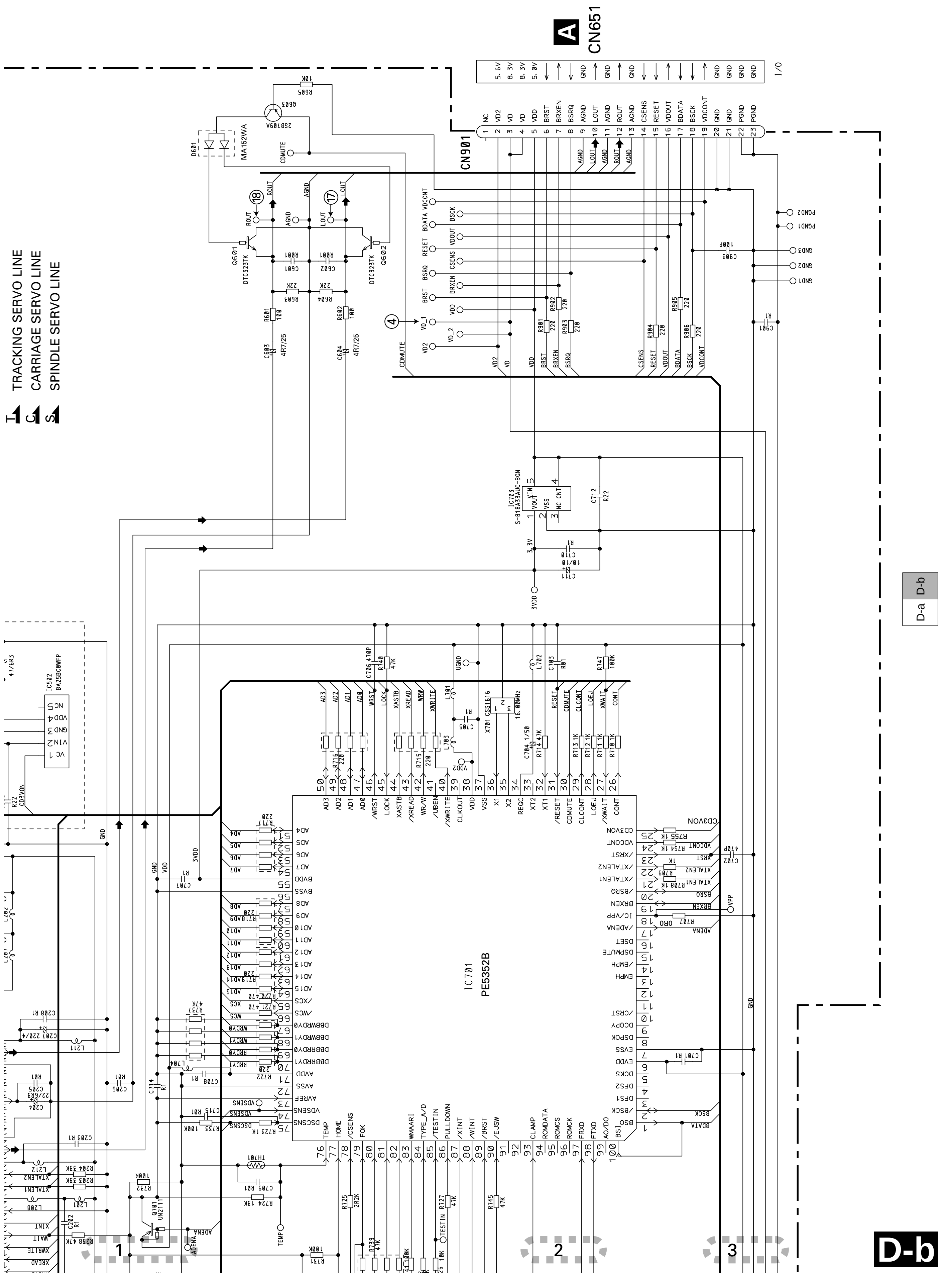
A B C D E F

D-a


D CD CORE UNIT (S10MP3)
IC501
UPD61002GC
WMA DECODER
IC202
MSM51V4265EP-70TS
SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
D-a
D-b

5 6 7 8

A



B

C

D

E

F

D-a D-b

D-b

● Waveforms

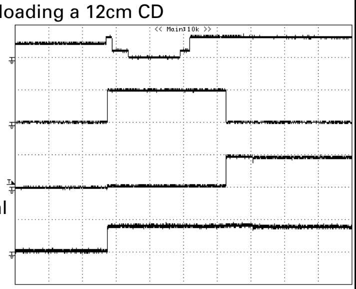
Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65V)

① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading a 12cm CD

Ref.: GND

Mode: Normal

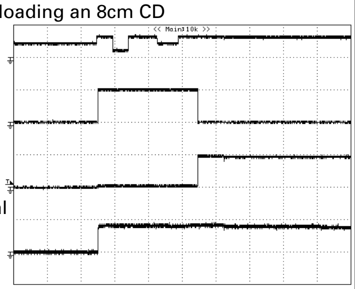


① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading an 8cm CD

Ref.: GND

Mode: Normal

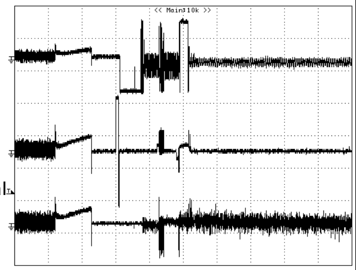


⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-DA disc

Ref.: REFO

Mode: Normal

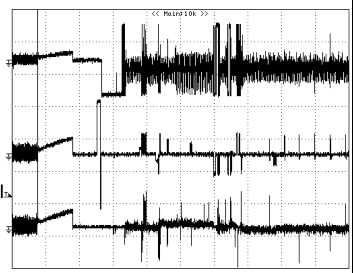


⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-ROM disc(1 session)

Ref.: REFO

Mode: Normal

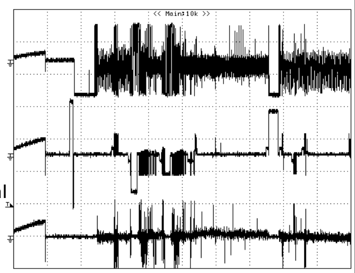


⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-ROM disc(3 session)

Ref.: REFO

Mode: Normal

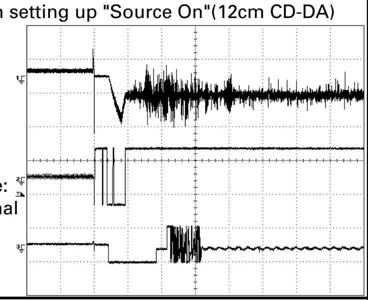


⑧ FIN 200mV/div 500ms/div
⑨ RFOK 2V/div
⑤ SIN 2V/div

When setting up "Source On"(12cm CD-DA)

Ref.: REFO

Mode: Normal

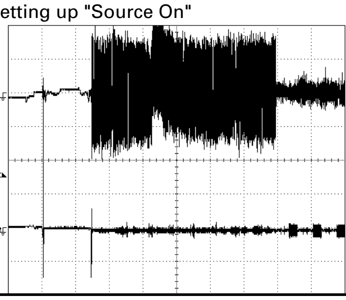


⑩ TE 500mV/div 200ms/div
⑪ FE 500mV/div

When setting up "Source On"

Ref.: REFO

Mode: Normal

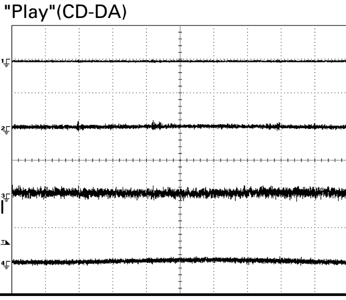


⑪ FE 500mV/div 20ms/div
⑧ FIN 500mV/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

During "Play"(CD-DA)

Ref.: REFO

Mode: Normal

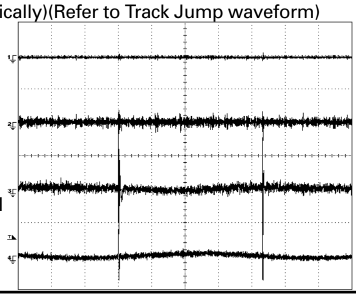


⑪ FE 500mV/div 20ms/div
⑧ FIN 500mV/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

During "Play"(CD-ROM)(Track Jump is generated periodically)(Refer to Track Jump waveform)

Ref.: REFO

Mode: Normal

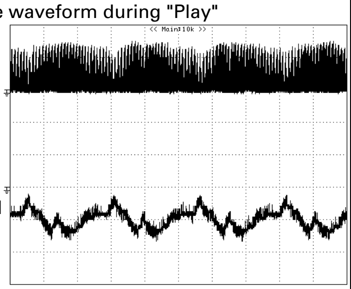


⑫ MDX 500mV/div 50ms/div
⑤ SIN 200mV/div

Spindle waveform during "Play"

Ref.: REFO

Mode: Normal

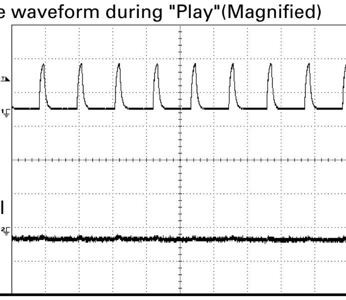


⑫ MDX 500mV/div 5µs/div
⑤ SIN 1V/div

Spindle waveform during "Play"(Magnified)

Ref.: REFO

Mode: Normal

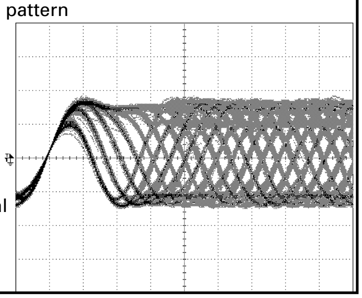


⑬ RFAGC 500mV/div 5µs/div

RF eye pattern

Ref.: REFO

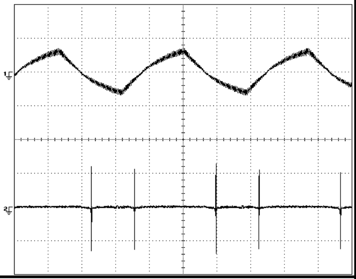
Mode: Normal



⑧ FIN 500mV/div 200ms/div
⑪ FE 500mV/div

Focus Search

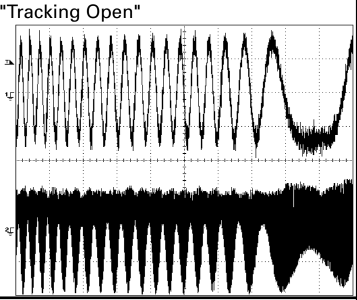
Ref.: REFO
Mode: TEST



⑩ TE 500mV/div 2ms/div
⑬ RFAGC 500mV/div

When "Tracking Open"

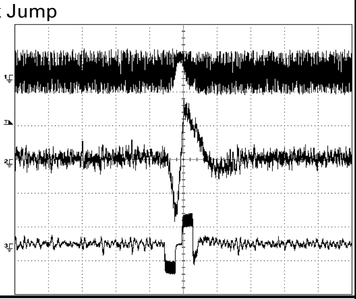
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 500µs/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

1 Track Jump

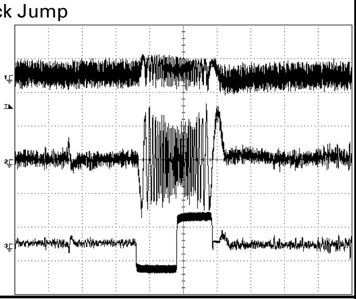
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 1ms/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

32 Track Jump

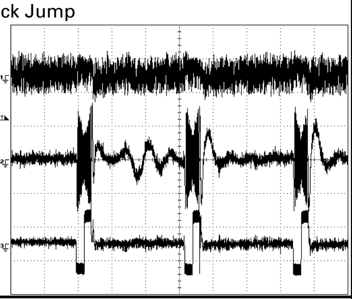
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 5ms/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

100 Track Jump

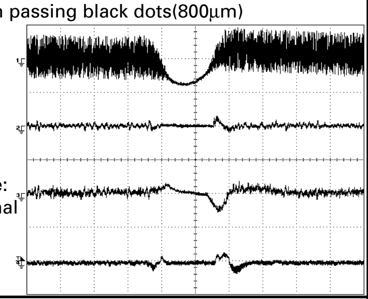
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 500µs/div
⑦ TIN 1V/div
⑩ TE 1V/div
⑧ FIN 1V/div

When passing black dots(800µm)

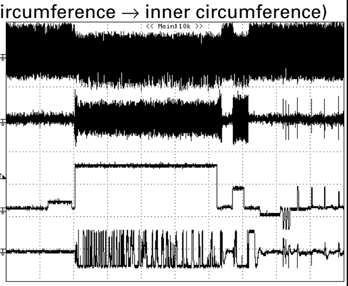
Ref.: REFO
Mode: Normal



⑬ RFAGC 1V/div 200ms/div
⑮ TE 1V/div
⑥ CIN 500mV/div
⑤ SIN 2V/div

During inside/outside search
(outer circumference → inner circumference)

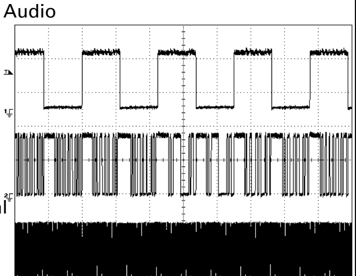
Ref.: REFO
Mode: Normal



⑭ LRCKIN 2V/div 10µs/div
⑮ DIN 2V/div
⑯ SCKIN 2V/div

Digital Audio

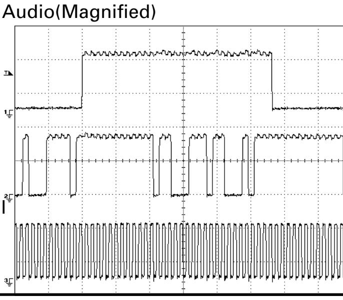
Ref.: GND
Mode: Normal



⑭ LRCKIN 2V/div 2µs/div
⑮ DIN 2V/div
⑯ SCKIN 2V/div

Digital Audio(Magnified)

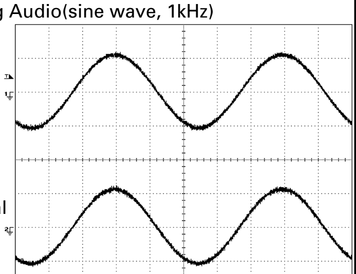
Ref.: REFO
Mode: Normal



⑰ LOUT 1V/div 200µs/div
⑱ ROUT 1V/div

Analog Audio(sine wave, 1kHz)

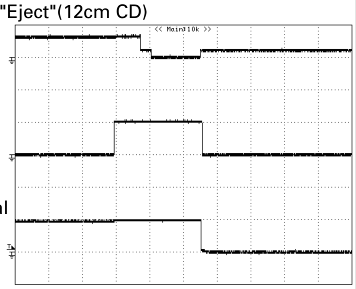
Ref.: AGND
Mode: Normal



① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div

When "Eject"(12cm CD)

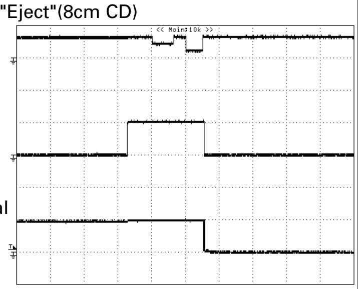
Ref.: GND
Mode: Normal



① DSCSNS 5V/div 10µs/div
② CLCONT 5V/div
③ LOEJ 5V/div

When "Eject"(8cm CD)

Ref.: GND
Mode: Normal

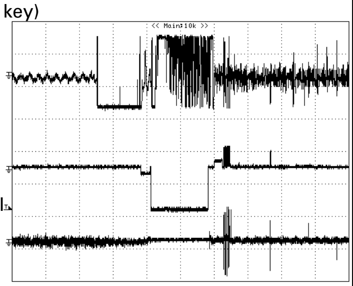


⑤ SIN 1V/div 500ms/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When switching to CD-ROM from CD-DA
(BAND key)

Ref.:
REFO

Mode:
Normal

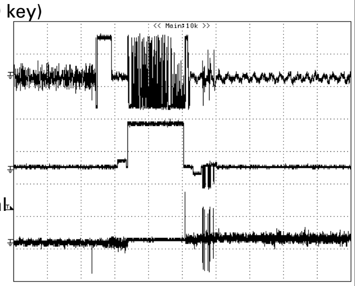


⑤ SIN 1V/div 500ms/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When switching to CD-DA from CD-ROM
(BAND key)

Ref.:
REFO

Mode:
Normal



A

B

C

D

E

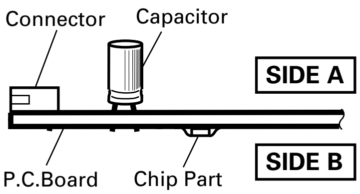
F

4. PCB CONNECTION DIAGRAM

4.1 TUNER AMP UNIT

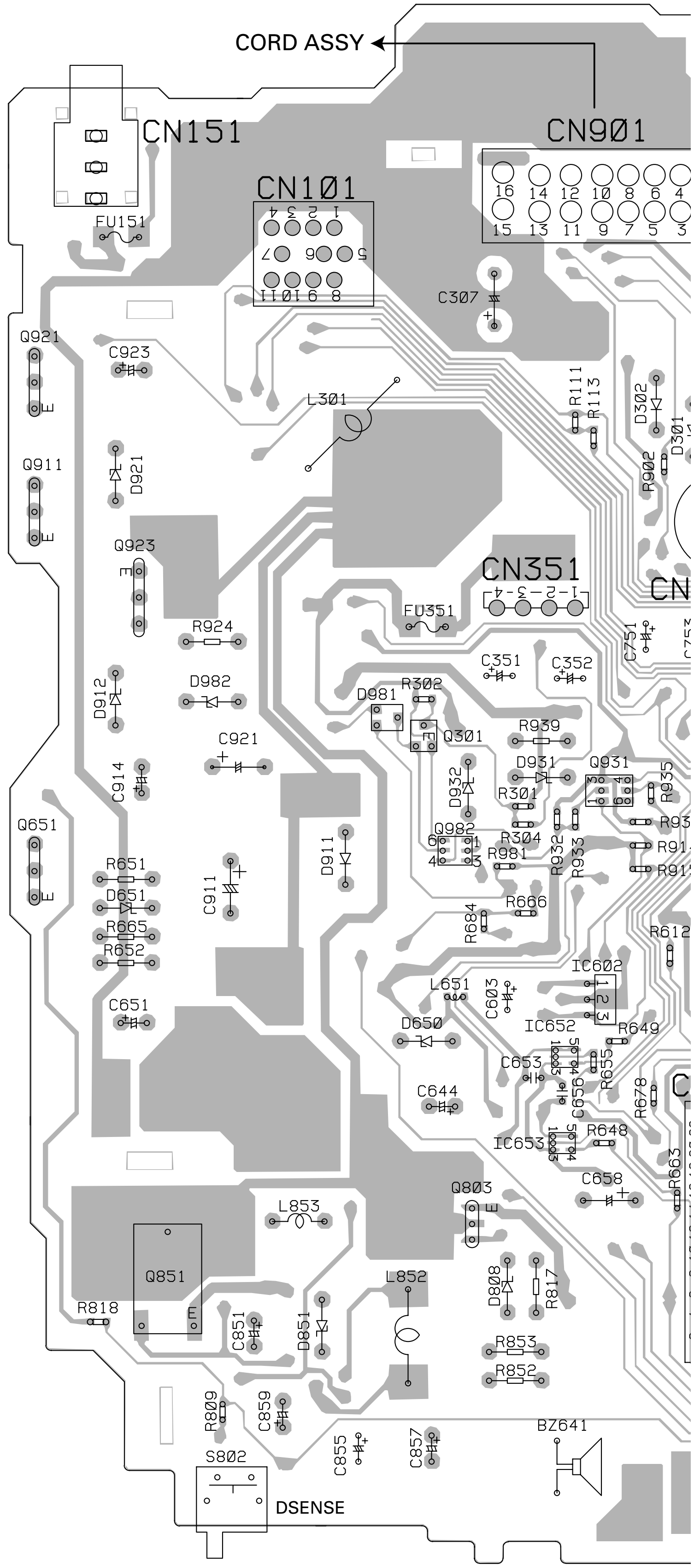
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



A TUNER AMP UNIT

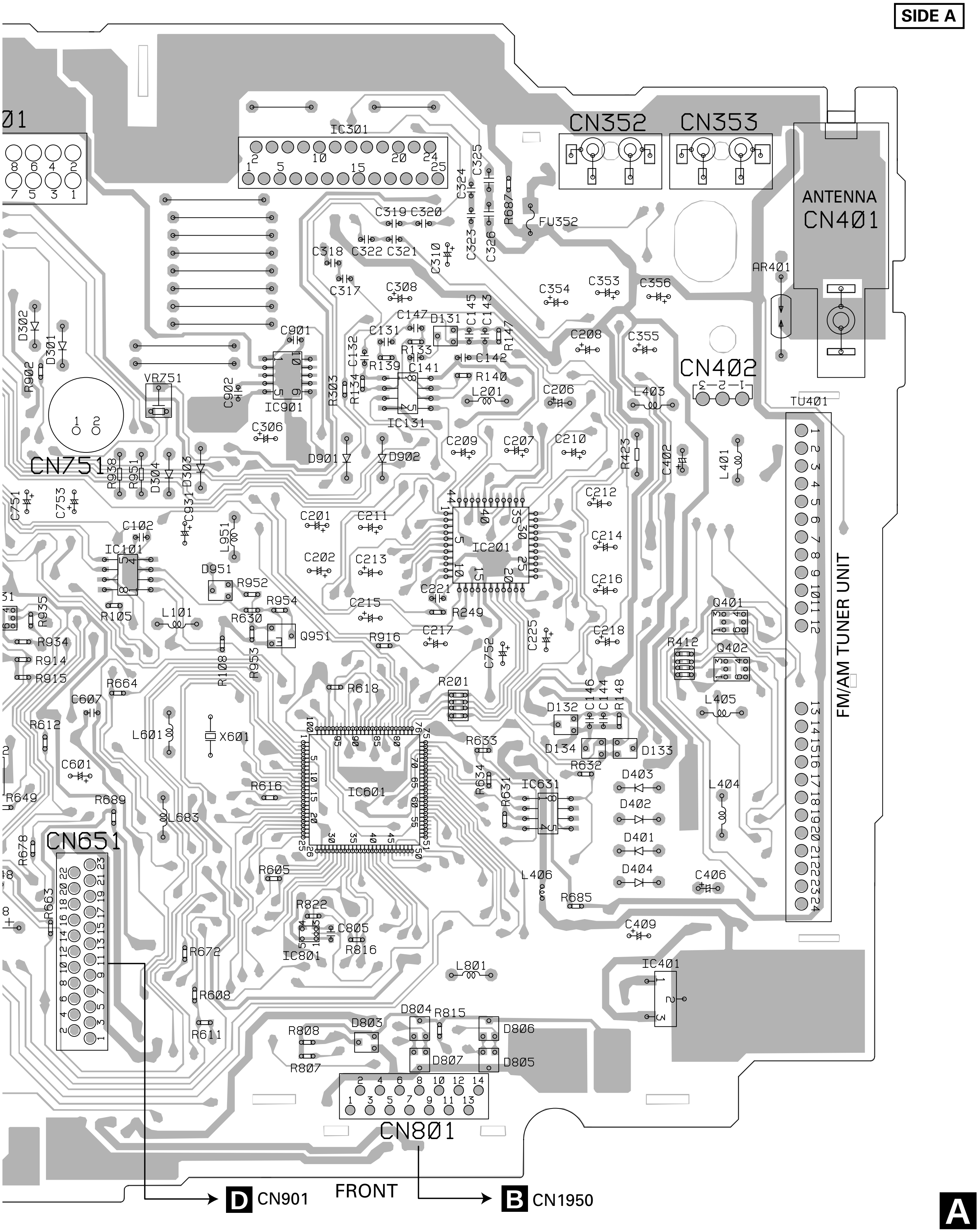
IC, Q	ADJ
IC301	
Q921	
Q911	
IC901	
Q923 IC131	
IC101 IC201	
Q301	
Q931	
Q401	
Q651 Q951	
Q982 Q402	
IC602	
IC631	
IC601	
IC652	
IC653	
Q803	
IC801	
IC401	
Q851	



A

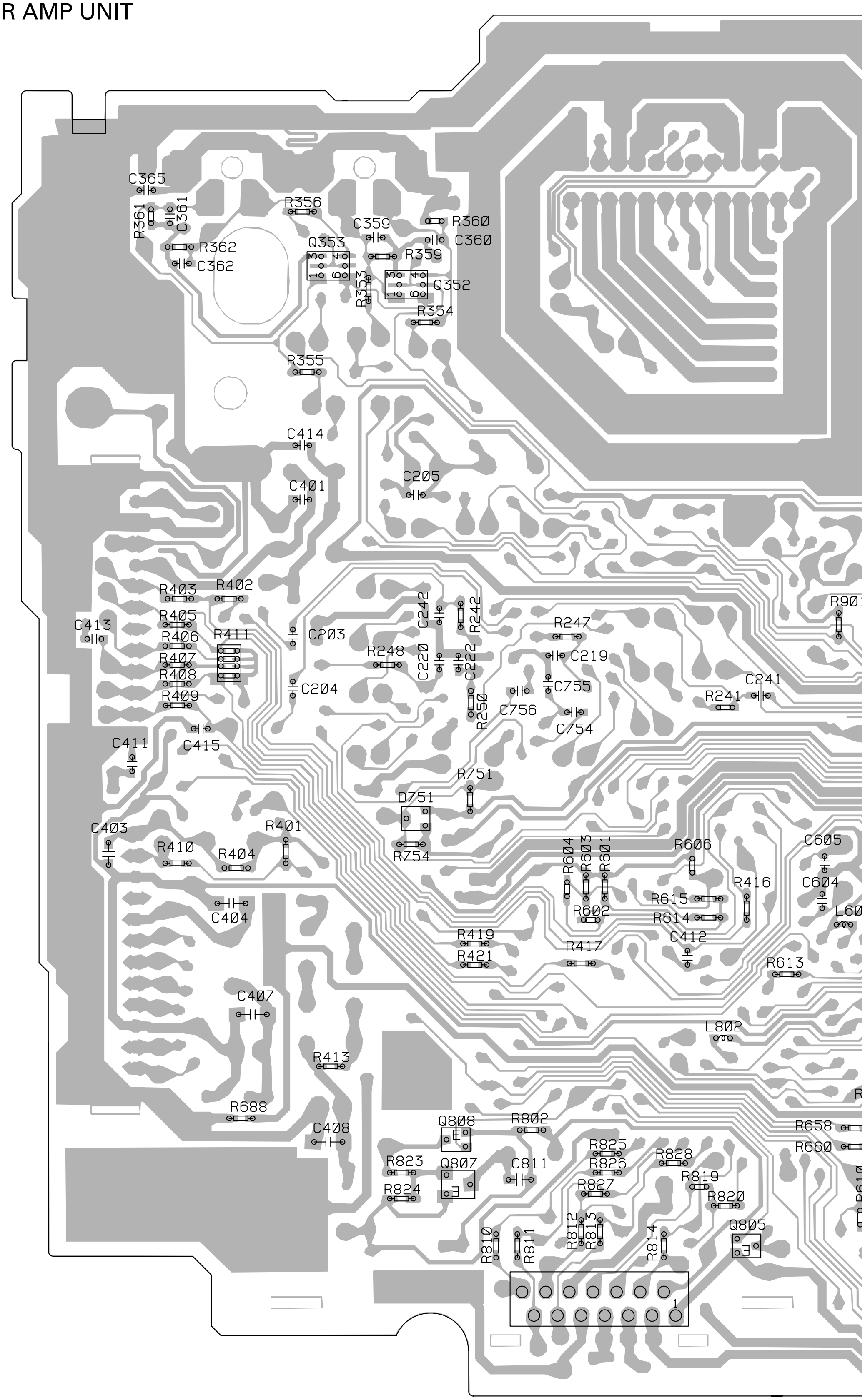
5 6 7 8

A B C D E F



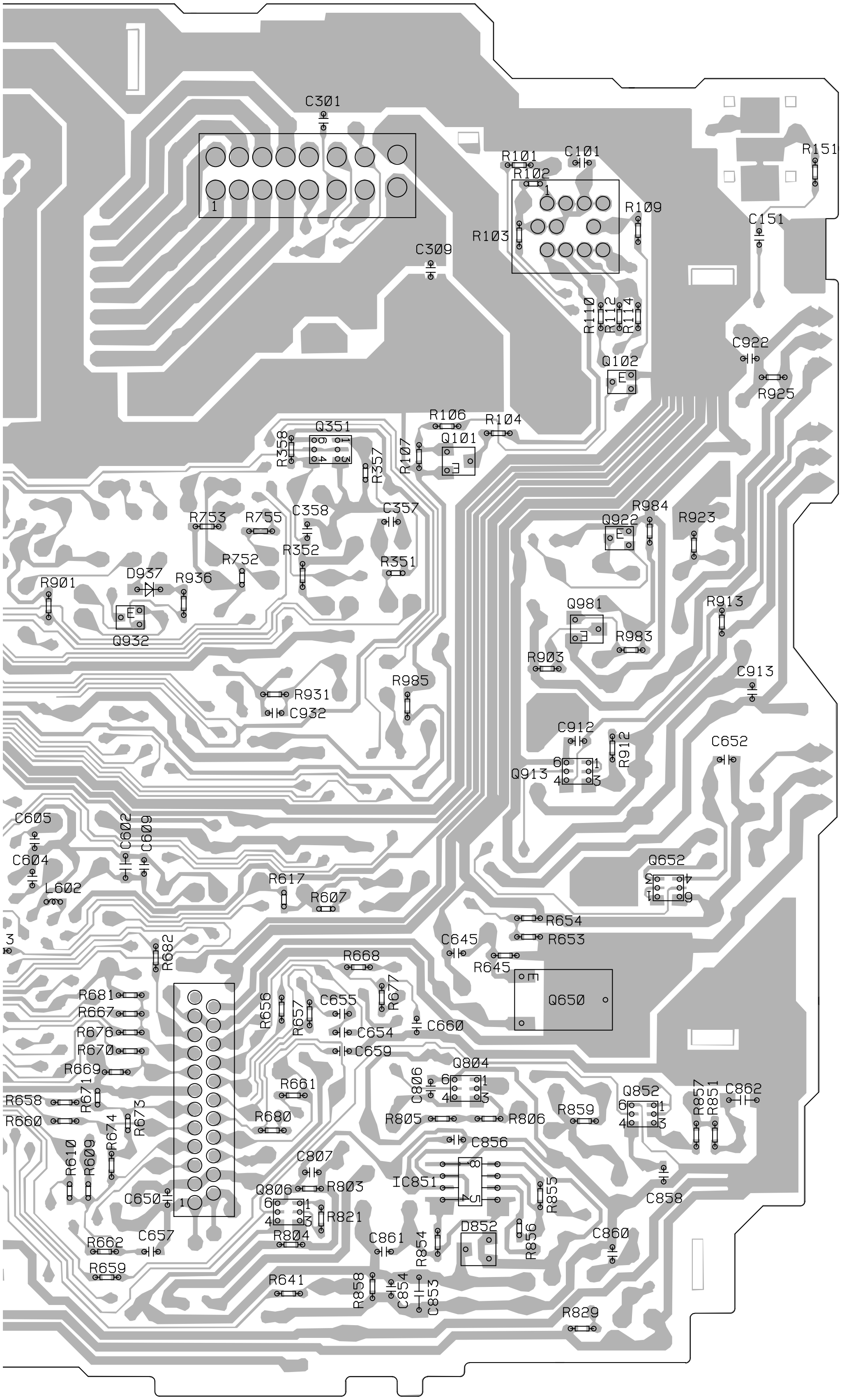
5 6 7 8

A TUNER AMP UNIT



A

SIDE B



IC,Q

Q353
Q352
Q102
Q351
Q101
Q922
Q981
Q932
Q913
Q652
Q650
Q804
Q852
Q808
Q807
IC851
Q805
Q806

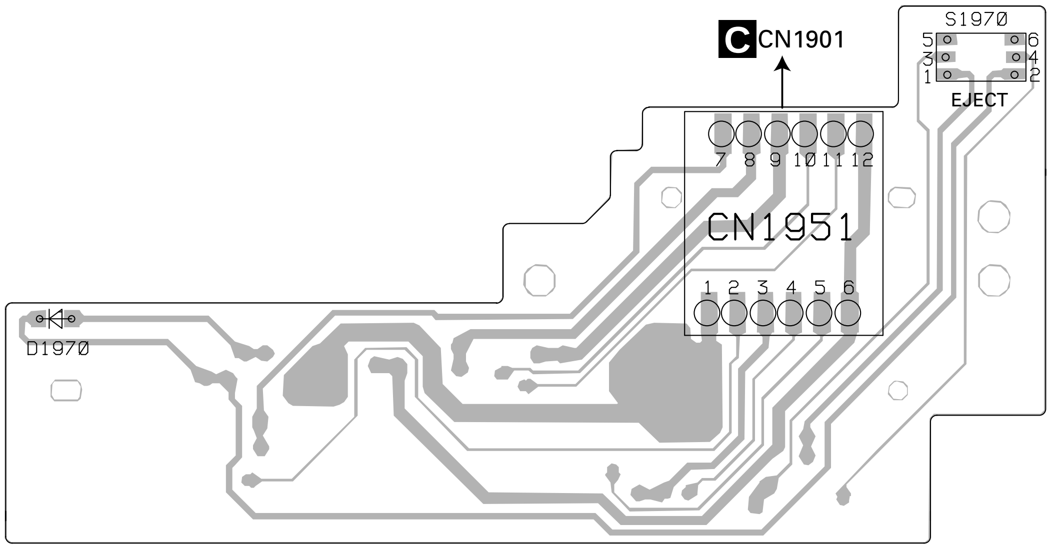
B C D E F

A

4.2 PANEL UNIT

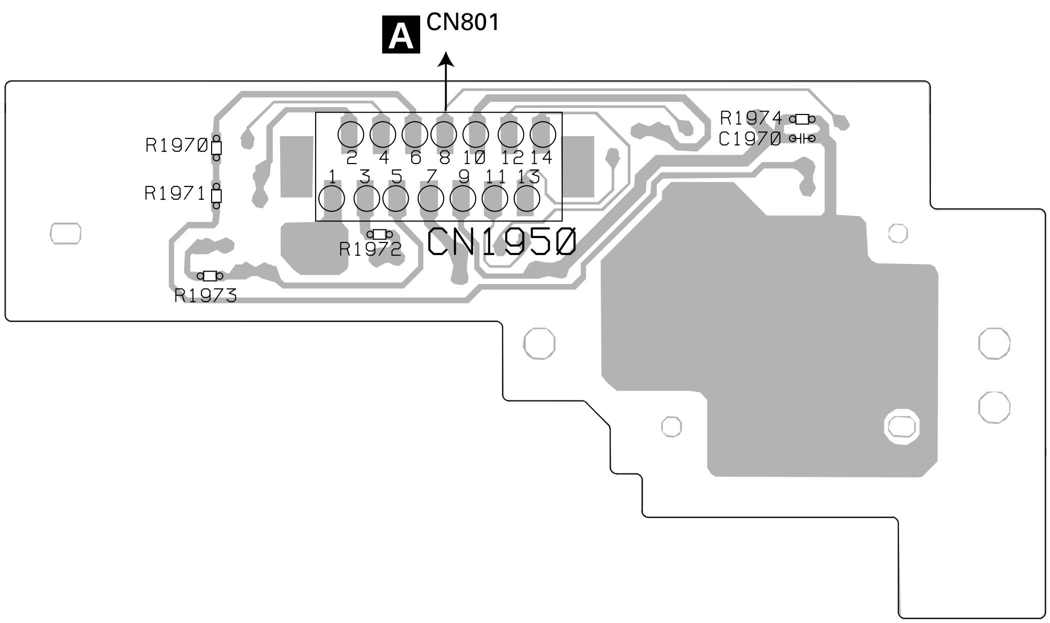
B PANEL UNIT

SIDE A



B PANEL UNIT

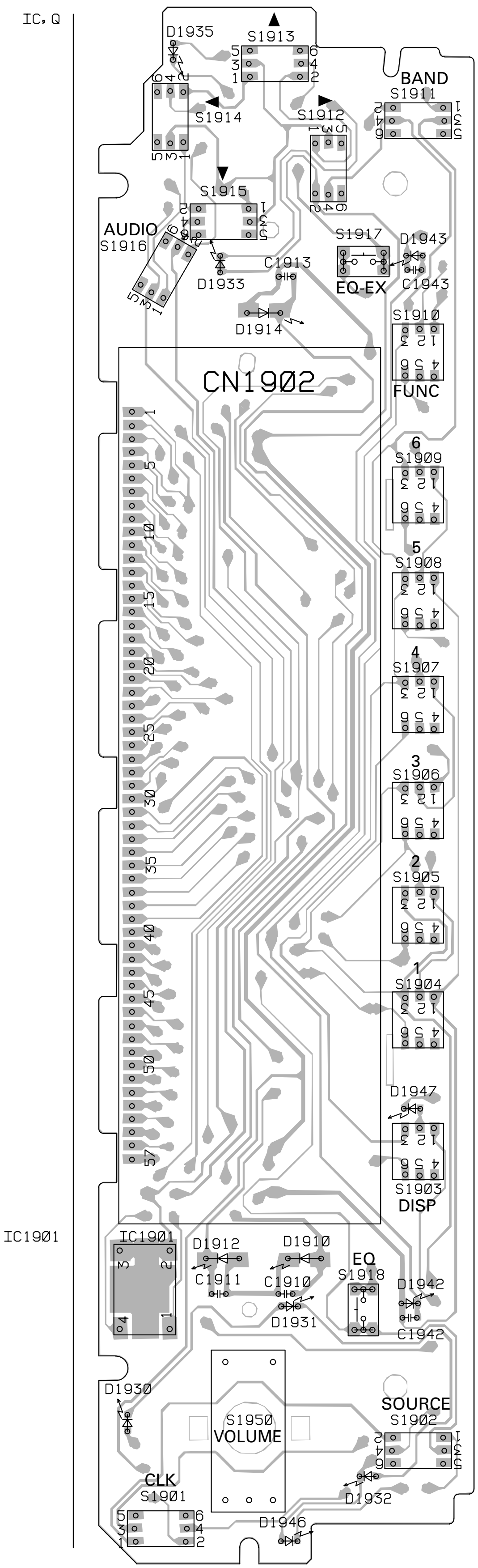
SIDE B



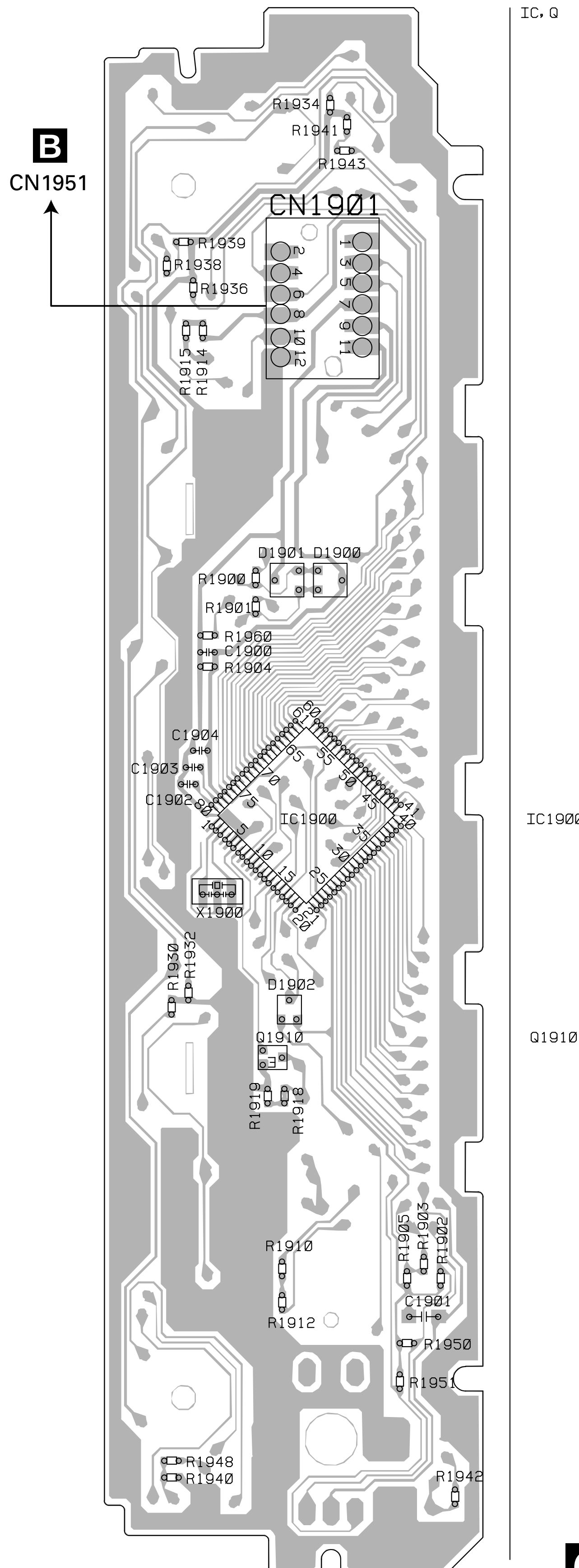
B

4.3 KEYBOARD UNIT

C KEYBOARD UNIT **SIDE A**



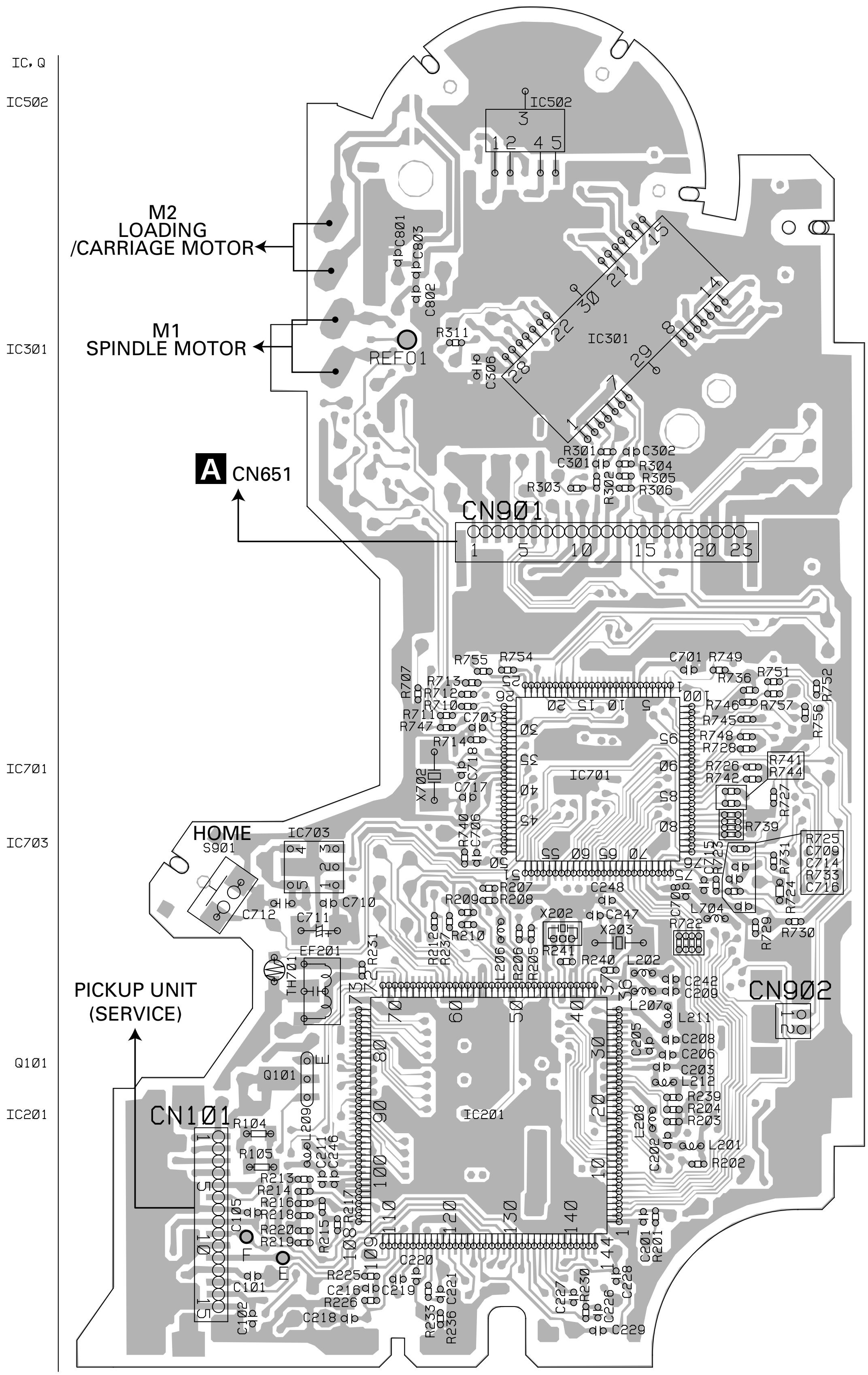
C KEYBOARD UNIT **SIDE B**



4.4 CD MECHANISM MODULE

D CD CORE UNIT(S10MP3)

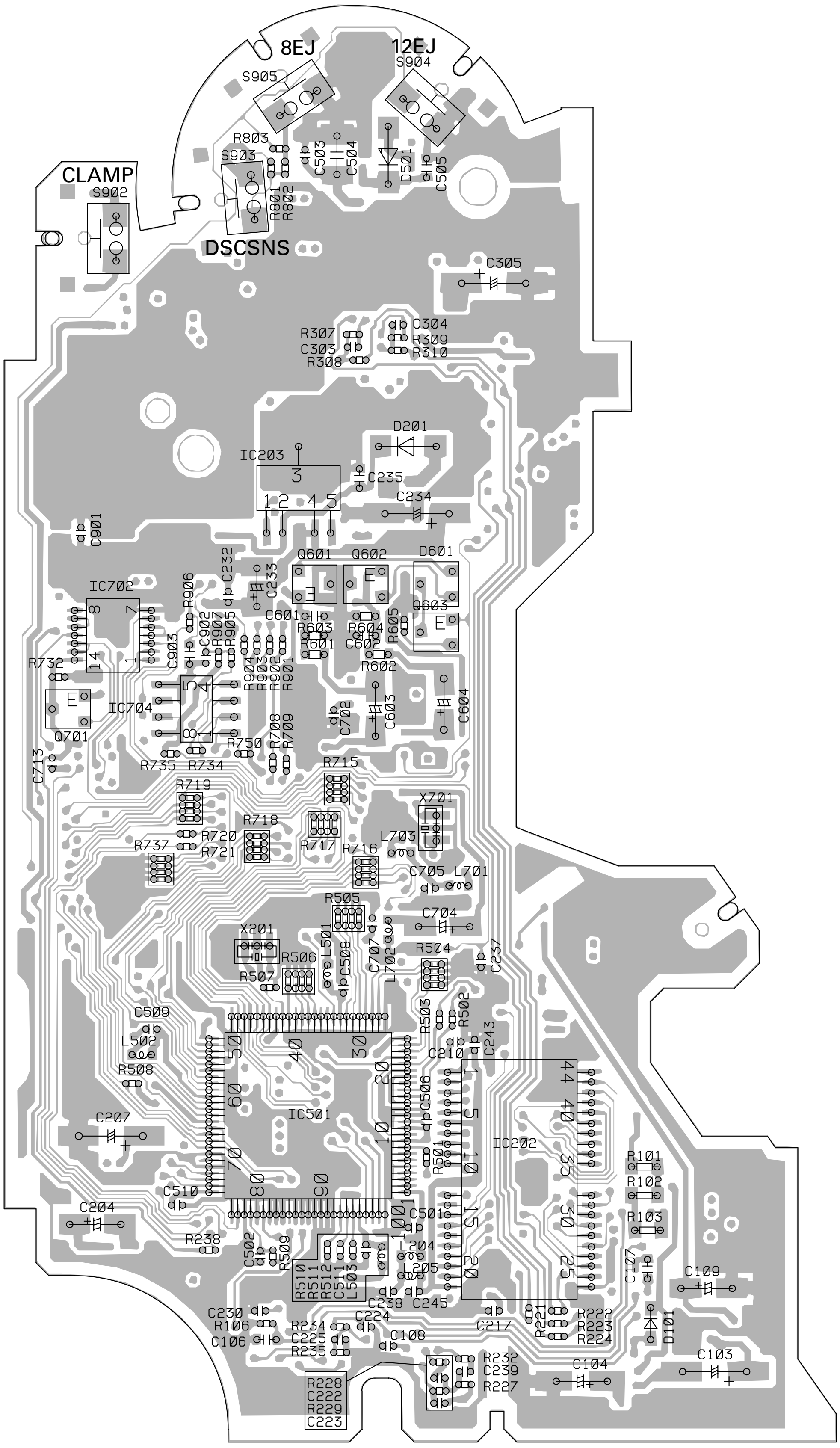
SIDE A



D

D CD CORE UNIT(S10MP3)

SIDE B



IC, Q

IC203

Q601 Q602

IC702

Q603

IC704

Q701

IC501

IC202

5. ELECTRICAL PARTS LIST

NOTES:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

  Chip Resistor

  RS1/○S○○○J,RS1/○○S○○○J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....

=====Circuit Symbol and No.===Part Name Part No.

A Unit Number : CWM8588(DEH-P550MP/XN/UC)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

Circuit Symbol	No.	Part Name	Part No.
IC	101	IC	HA12187FP
IC	131	IC	NJM4558MD
IC	201	IC	PML009A
IC	301	IC	PAL007A
IC	401	IC	NJM2391DL1-33
IC	601	IC	PD5800A
IC	602	IC	S-80835ANUP-EDZ
Q	101	Transistor	2SA1037K
Q	102	Transistor	DTC114EU
Q	301	Transistor	DTC124EU
Q	351	Transistor	IMH3A
Q	352	Transistor	IMH3A
Q	353	Transistor	IMH3A
Q	650	Transistor	2SD1760F5
Q	651	Transistor	2SD2396
Q	652	Transistor	IMD2A
Q	803	Transistor	2SD1767
Q	804	Transistor	IMD2A
Q	805	Transistor	DTC143EU
Q	806	Transistor	IMD14
Q	807	Transistor	2SA1037K
Q	808	Transistor	DTC114EU
Q	911	Transistor	2SD2396
Q	913	Transistor	IMD2A
Q	921	Transistor	2SD2396
Q	922	Transistor	DTC114EU
Q	923	Transistor	2SB1243
Q	931	Transistor	IMX1
Q	932	Transistor	DTC114EU
Q	951	Transistor	2SA1037K
Q	981	Transistor	2SC2412K
Q	982	Transistor	IMD2A
D	131	Diode Network	DA204U
D	132	Diode Network	DA204U
D	133	Diode	DAN202U
D	134	Diode	DAP202U
D	301	Diode	S5688G
D	302	Diode	S5688G
D	303	Diode	S5688G
D	304	Diode	S5688G
D	401	Diode	S5688G
D	402	Diode	S5688G
D	403	Diode	S5688G
D	650	Diode	HZS6L(C1)
D	651	Diode	HZS9L(B1)
D	803	Diode Network	DA204U
D	804	Diode	DAN202U
D	805	Diode	DAP202U
D	806	Diode	DAN202U
D	807	Diode	DAP202U
D	808	Diode	HZS11L(A1)
D	911	Diode	S5688G
D	912	Diode	HZS6L(B2)
D	921	Diode	HZS9L(B3)
D	931	Diode	HZS7L(A1)
D	932	Diode	HZS7L(C3)
D	937	Diode	MA110
D	951	Diode	DAN202U
D	981	Diode	DAN202U
D	982	Diode	HZS9L(A2)
L	101	Inductor	LAU2R2K
L	201	Ferri-Inductor	LAU4R7K
L	301	Choke Coil 600μH	CTH1280
L	401	Ferri-Inductor	LAU4R7K
L	403	Inductor	LAU1R0K
L	404	Inductor	LAU1R0K
L	406	Inductor	CTF1385
L	601	Ferri-Inductor	LAU100K
L	683	Ferri-Inductor	LAU4R7K
L	801	Inductor	LAU2R2K
L	951	Inductor	LAU2R2K
X	601	Radiator 10.00MHz	CSS1599
S	802	Switch(DSENSE)	CSN1039
		FM/AM Tuner Unit	CWE1646
		Fuse 10A	CEK1208
BZ	641	Buzzer	CPV1062
AR	401	Surge Protector	DSP-201M-S00B

RESISTORS

Circuit Symbol	No.	Part Name	Part No.
R	101		RS1/16S101J
R	102		RS1/16S620J
R	103		RS1/16S101J
R	104		RS1/16S222J
R	105		RS1/16S103J
R	106		RS1/16S472J
R	107		RS1/16S223J
R	108		RS1/16S472J
R	109		RS1/16S821J
R	110		RS1/16S821J
R	111		RS1/16S223J
R	112		RS1/16S223J
R	113		RS1/16S102J
R	114		RS1/16S102J
R	133		RS1/16S563J
R	134		RS1/16S104J
R	139		RS1/16S563J
R	140		RS1/16S104J
R	147		RS1/16S474J
R	148		RS1/16S474J
R	201		RAB4C102J
R	241		RS1/16S102J
R	242		RS1/16S102J
R	247		RS1/16S101J
R	248		RS1/16S101J

=====Circuit Symbol and No.===Part Name		Part No.
R	249	RS1/16S101J
R	250	RS1/16S101J
R	301	RS1/16S103J
R	302	RS1/16S103J
R	303	RS1/16S153J
R	304	RS1/16S331J
R	351	RS1/16S821J
R	352	RS1/16S821J
R	353	RS1/16S821J
R	354	RS1/16S821J
R	355	RS1/16S821J
R	356	RS1/16S821J
R	357	RS1/16S223J
R	358	RS1/16S223J
R	359	RS1/16S223J
R	360	RS1/16S223J
R	361	RS1/16S223J
R	362	RS1/16S223J
R	403	RS1/16S681J
R	404	RS1/16S0R0J
R	405	RS1/16S681J
R	406	RS1/16S681J
R	407	RS1/16S681J
R	408	RS1/16S681J
R	410	RS1/16S681J
R	413	RS1/16S0R0J
R	416	RS1/16S681J
R	417	RS1/16S681J
R	419	RS1/16S681J
R	421	RS1/16S681J
R	423	RD1/4PU0R0J
R	602	RS1/16S104J
R	605	RS1/16S0R0J
R	606	RS1/16S104J
R	607	RS1/16S822J
R	608	RS1/16S221J
R	609	RS1/16S221J
R	610	RS1/16S682J
R	611	RS1/16S682J
R	612	RS1/16S104J
R	613	RS1/16S102J
R	615	RS1/16S0R0J
R	616	RS1/16S473J
R	617	RS1/16S102J
R	618	RS1/16S104J
R	630	RS1/16S104J
R	632	RS1/16S104J
R	641	RS1/16S102J
R	645	RS1/16S271J
R	651	RD1/4PU221J
R	652	RD1/4PU221J
R	656	RS1/16S102J
R	657	RS1/16S102J
R	665	RD1/4PU0R0J
R	666	RS1/16S0R0J
R	669	RS1/16S0R0J
R	671	RS1/16S0R0J
R	672	RS1/16S0R0J
R	676	RS1/16S102J
R	677	RS1/16S104J
R	678	RS1/16S102J
R	680	RS1/16S222J
R	681	RS1/16S104J
R	689	RS1/16S0R0J
R	802	RS1/16S222J

=====Circuit Symbol and No.===Part Name		Part No.
R	803	RS1/16S472J
R	804	RS1/16S1R0J
R	805	RS1/16S391J
R	806	RS1/16S391J
R	807	RS1/16S473J
R	808	RS1/16S473J
R	809	RS1/16S102J
R	810	RS1/16S222J
R	811	RS1/16S222J
R	812	RS1/16S222J
R	813	RS1/16S222J
R	814	RS1/16S222J
R	815	RS1/16S473J
R	816	RS1/16S104J
R	817	RD1/4PU391J
R	818	RS1/16S104J
R	819	RS1/16S222J
R	820	RS1/16S222J
R	821	RS1/16S472J
R	822	RS1/16S0R0J
R	823	RS1/16S102J
R	824	RS1/16S473J
R	825	RS1/16S102J
R	826	RS1/16S102J
R	827	RS1/16S102J
R	828	RS1/16S102J
R	903	RS1/16S223J
R	912	RS1/16S222J
R	913	RS1/16S223J
R	914	RS1/16S104J
R	915	RS1/16S104J
R	916	RS1/16S104J
R	923	RS1/16S103J
R	924	RD1/4PU122J
R	925	RS1/16S182J
R	931	RS1/16S472J
R	932	RS1/16S473J
R	933	RS1/16S103J
R	934	RS1/16S473J
R	935	RS1/16S104J
R	936	RS1/16S103J
R	938	RD1/4PU102J
R	939	RD1/4PU102J
R	951	RD1/4PU153J
R	952	RS1/16S472J
R	953	RS1/16S472J
R	954	RS1/16S102J
R	983	RS1/16S223J
R	984	RS1/16S473J
R	985	RS1/16S102J

CAPACITORS

C	101	CKSRYB104K16
C	102	CKSRYB473K25
C	131	CKSRYB104K16
C	132	CKSRYB104K16
C	141	CKSRYB104K16
C	142	CKSRYB103K50
C	143	CKSRYB474K10
C	144	CKSRYB474K10
C	145	CCSRCH101J50
C	146	CCSRCH101J50
C	147	CKSRYB104K16
C	201	CEJQ1R0M50
C	202	CEJQ1R0M50
C	203	CKSRYB104K16
C	204	CKSRYB104K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	205		CKSRYB104K16
C	206		CEJQ470M16
C	207		CEJQ1R0M50
C	208		CEJQ1R0M50
C	209		CEJQ1R0M50
C	210		CEJQ1R0M50
C	211		CEJQ4R7M35
C	212		CEJQ4R7M35
C	213		CEJQ4R7M35
C	214		CEJQ4R7M35
C	215		CEJQ4R7M35
C	216		CEJQ4R7M35
C	217		CEJQ4R7M35
C	218		CEJQ4R7M35
C	219		CCSRCH120J50
C	220		CCSRCH120J50
C	221		CCSRCH120J50
C	222		CCSRCH120J50
C	225		CEJQ100M16
C	241		CKSRYB152K50
C	242		CKSRYB152K50
C	301		CKSRYB104K16
C	306		CEJQ330M10
C	307	3300μF/16V	CCH1486
C	309		CKSRYB104K16
C	310		CEJQ100M16
C	311		CKSYB475K16
C	312		CKSYB475K16
C	317		CKSRYB474K10
C	318		CKSRYB474K10
C	319		CKSRYB474K10
C	320		CKSRYB474K10
C	321		CKSRYB474K10
C	322		CKSRYB474K10
C	323		CKSRYB474K10
C	324		CKSRYB474K10
C	325		CKSQYB225K10
C	326		CKSQYB225K10
C	351		CEJQ4R7M35
C	352		CEJQ4R7M35
C	353		CEJQ4R7M35
C	354		CEJQ4R7M35
C	355		CEJQ4R7M35
C	356		CEJQ4R7M35
C	401		CKSRYB103K50
C	402		CEJQ101M10
C	403		CKSQYB105K16
C	404		CKSYB475K10
C	406		CEJQ470M10
C	408		CKSYB475K10
C	409		CEJQ1R0M50
C	411		CCSRCH101J50
C	412		CCSRCH470J50
C	601		CEJQ4R7M35
C	602		CKSQYB105K16
C	603		CEJQ2R2M50
C	604		CCSRCH200J50
C	605		CCSRCH200J50
C	609		CCSRCH101J50
C	644		CEJQ101M10
C	645		CKSRYB473K25
C	646		CCSRCH470J50
C	651		CEJQ101M10
C	652		CKSRYB473K25
C	654		CKSRYB152K50

=====Circuit Symbol and No.		===Part Name	Part No.
C	655		CKSRYB152K50
C	657		CCSRCH470J50
C	658	470μF/16V	CCH1183
C	662		CCSRCH471J50
C	755		CKSRYB104K16
C	806		CKSRYB473K25
C	807		CKSRYB473K25
C	811		CKSQYB105K16
C	854		CKSRYB473K25
C	911	470μF/16V	CCH1331
C	912		CKSRYB472K50
C	913		CKSRYB103K50
C	914		CEJQ470M10
C	921		CEJQ221M10
C	922		CKSRYB103K50
C	923		CEJQ101M16
C	931		CEJQ1R0M50

A Unit Number : CWM8589(DEH-P5500MP/XN/UC)
CWM8590(DEH-P5550MP/XN/ES)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC	101	IC	HA12187FP
IC	131	IC	NJM4558MD
IC	201	IC	PML009A
IC	301	IC	PAL007A
IC	401	IC	NJM2391DL1-33
IC	601	IC	PD5800A
IC	602	IC	S-80835ANUP-EDZ
Q	101	Transistor	2SA1037K
Q	102	Transistor	DTC114EU
Q	301	Transistor	DTC124EU
Q	352	Transistor	IMH3A
Q	353	Transistor	IMH3A
Q	650	Transistor	2SD1760F5
Q	651	Transistor	2SD2396
Q	652	Transistor	IMD2A
Q	803	Transistor	2SD1767
Q	804	Transistor	IMD2A
Q	805	Transistor	DTC143EU
Q	806	Transistor	IMD14
Q	807	Transistor	2SA1037K
Q	808	Transistor	DTC114EU
Q	911	Transistor	2SD2396
Q	913	Transistor	IMD2A
Q	921	Transistor	2SD2396
Q	922	Transistor	DTC114EU
Q	923	Transistor	2SB1243
Q	931	Transistor	IMX1
Q	932	Transistor	DTC114EU
Q	951	Transistor	2SA1037K
Q	981	Transistor	2SC2412K
Q	982	Transistor	IMD2A
D	131	Diode Network	DA204U
D	132	Diode Network	DA204U
D	133	Diode	DAN202U
D	134	Diode	DAP202U
D	301	Diode	S5688G
D	302	Diode	S5688G
D	303	Diode	S5688G
D	304	Diode	S5688G
D	401	Diode	S5688G
D	402	Diode	S5688G
D	403	Diode	S5688G
D	650	Diode	HZS6L(C1)
D	651	Diode	HZS9L(B1)
D	803	Diode Network	DA204U

=====Circuit Symbol and No.===Part Name			Part No.
D	804	Diode	DAN202U
D	805	Diode	DAP202U
D	806	Diode	DAN202U
D	807	Diode	DAP202U
D	808	Diode	HZS11L(A1)
D	911	Diode	S5688G
D	912	Diode	HZS6L(B2)
D	921	Diode	HZS9L(B3)
D	931	Diode	HZS7L(A1)
D	932	Diode	HZS7L(C3)
D	937	Diode	MA110
D	951	Diode	DAN202U
D	981	Diode	DAN202U
D	982	Diode	HZS9L(A2)
L	101	Inductor	LAU2R2K
L	201	Ferri-Inductor	LAU4R7K
L	301	Choke Coil 600μH	CTH1280
L	401	Ferri-Inductor	LAU4R7K
L	403	Inductor	LAU1R0K
L	404	Inductor	LAU1R0K
L	406	Inductor	CTF1385
L	601	Ferri-Inductor	LAU100K
L	683	Ferri-Inductor	LAU4R7K
L	801	Inductor	LAU2R2K
L	951	Inductor	LAU2R2K
X	601	Radiator 10.00MHz	CSS1599
S	802	Switch(DSENSE)	CSN1039
		Fuse 10A	CEK1208
		FM/AM Tuner Unit	CWE1646
BZ	641	Buzzer	CPV1062
AR	401	Surge Protector	DSP-201M-S00B

RESISTORS

R	101		RS1/16S101J
R	102		RS1/16S620J
R	103		RS1/16S101J
R	104		RS1/16S222J
R	105		RS1/16S103J
R	106		RS1/16S472J
R	107		RS1/16S223J
R	108		RS1/16S472J
R	109		RS1/16S821J
R	110		RS1/16S821J
R	111		RS1/16S223J
R	112		RS1/16S223J
R	113		RS1/16S102J
R	114		RS1/16S102J
R	133		RS1/16S563J
R	134		RS1/16S104J
R	139		RS1/16S563J
R	140		RS1/16S104J
R	147		RS1/16S474J
R	148		RS1/16S474J
R	201		RAB4C102J
R	241		RS1/16S102J
R	242		RS1/16S102J
R	247		RS1/16S101J
R	248		RS1/16S101J
R	249		RS1/16S101J
R	250		RS1/16S101J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S153J
R	304		RS1/16S331J
R	353		RS1/16S821J
R	354		RS1/16S821J
R	355		RS1/16S821J
R	356		RS1/16S821J

=====Circuit Symbol and No.===Part Name			Part No.
R	359		RS1/16S223J
R	360		RS1/16S223J
R	361		RS1/16S223J
R	362		RS1/16S223J
R	403		RS1/16S681J
R	404		RS1/16S0R0J
R	405		RS1/16S681J
R	406		RS1/16S681J
R	407		RS1/16S681J
R	408		RS1/16S681J
R	410		RS1/16S681J
R	413		RS1/16S0R0J
R	416		RS1/16S681J
R	417		RS1/16S681J
R	419		RS1/16S681J
R	421		RS1/16S681J
R	423		RD1/4PU0R0J
R	601	(DEH-P5550MP/XN/ES)	RS1/16S104J
R	602	(DEH-P5500MP/XN/UC)	RS1/16S104J
R	605		RS1/16S0R0J
R	606		RS1/16S104J
R	607		RS1/16S822J
R	608		RS1/16S221J
R	609		RS1/16S221J
R	610		RS1/16S682J
R	611		RS1/16S682J
R	612		RS1/16S104J
R	613		RS1/16S102J
R	615		RS1/16S0R0J
R	616		RS1/16S473J
R	617		RS1/16S102J
R	618		RS1/16S104J
R	630		RS1/16S104J
R	632		RS1/16S104J
R	641		RS1/16S102J
R	645		RS1/16S271J
R	651		RD1/4PU221J
R	652		RD1/4PU221J
R	656		RS1/16S102J
R	657		RS1/16S102J
R	665		RD1/4PU0R0J
R	666		RS1/16S0R0J
R	669		RS1/16S0R0J
R	671		RS1/16S0R0J
R	672		RS1/16S0R0J
R	676		RS1/16S102J
R	677		RS1/16S104J
R	678		RS1/16S102J
R	680		RS1/16S222J
R	681		RS1/16S104J
R	689		RS1/16S0R0J
R	802		RS1/16S222J
R	803		RS1/16S472J
R	804		RS1/16S1R0J
R	805		RS1/16S391J
R	806		RS1/16S391J
R	807		RS1/16S473J
R	808		RS1/16S473J
R	809		RS1/16S102J
R	810		RS1/16S222J
R	811		RS1/16S222J
R	812		RS1/16S222J
R	813		RS1/16S222J
R	814		RS1/16S222J
R	815		RS1/16S473J

=====Circuit Symbol and No.===Part Name			Part No.
R	816		RS1/16S104J
R	817		RD1/4PU391J
R	818		RS1/16S104J
R	819		RS1/16S222J
R	820		RS1/16S222J
R	821		RS1/16S472J
R	822		RS1/16S0R0J
R	823		RS1/16S102J
R	824		RS1/16S473J
R	825		RS1/16S102J
R	826		RS1/16S102J
R	827		RS1/16S102J
R	828		RS1/16S102J
R	903		RS1/16S223J
R	912		RS1/16S222J
R	913		RS1/16S223J
R	914		RS1/16S104J
R	915		RS1/16S104J
R	916		RS1/16S104J
R	923		RS1/16S103J
R	924		RD1/4PU122J
R	925		RS1/16S182J
R	931		RS1/16S472J
R	932		RS1/16S473J
R	933		RS1/16S103J
R	934		RS1/16S473J
R	935		RS1/16S104J
R	936		RS1/16S103J
R	938		RD1/4PU102J
R	939		RD1/4PU102J
R	951		RD1/4PU153J
R	952		RS1/16S472J
R	953		RS1/16S472J
R	954		RS1/16S102J
R	983		RS1/16S223J
R	984		RS1/16S473J
R	985		RS1/16S102J

CAPACITORS

C	101		CKSRYB104K16
C	102		CKSRYB473K25
C	131		CKSRYB104K16
C	132		CKSRYB104K16
C	141		CKSRYB104K16
C	142		CKSRYB103K50
C	143		CKSRYB474K10
C	144		CKSRYB474K10
C	145		CCSRCH101J50
C	146		CCSRCH101J50
C	147		CKSRYB104K16
C	201		CEJQ1R0M50
C	202		CEJQ1R0M50
C	203		CKSRYB104K16
C	204		CKSRYB104K16
C	205		CKSRYB104K16
C	206		CEJQ470M16
C	207		CEJQ1R0M50
C	208		CEJQ1R0M50
C	209		CEJQ1R0M50
C	210		CEJQ1R0M50
C	211		CEJQ4R7M35
C	212		CEJQ4R7M35
C	213		CEJQ4R7M35
C	214		CEJQ4R7M35
C	215		CEJQ4R7M35
C	216		CEJQ4R7M35
C	217		CEJQ4R7M35
C	218		CEJQ4R7M35
C	219		CCSRCH120J50

=====Circuit Symbol and No.===Part Name			Part No.
C	220		CCSRCH120J50
C	221		CCSRCH120J50
C	222		CCSRCH120J50
C	225		CEJQ100M16
C	241		CKSRYB152K50
C	242		CKSRYB152K50
C	301		CKSRYB104K16
C	306		CEJQ330M10
C	307	3300μF/16V	CCH1486
C	309		CKSRYB104K16
C	310		CEJQ100M16
C	311		CKSYB475K16
C	312		CKSYB475K16
C	317		CKSRYB474K10
C	318		CKSRYB474K10
C	319		CKSRYB474K10
C	320		CKSRYB474K10
C	321		CKSRYB474K10
C	322		CKSRYB474K10
C	323		CKSRYB474K10
C	324		CKSRYB474K10
C	325		CKSQYB225K10
C	326		CKSQYB225K10
C	353		CEJQ4R7M35
C	354		CEJQ4R7M35
C	355		CEJQ4R7M35
C	356		CEJQ4R7M35
C	401		CKSRYB103K50
C	402		CEJQ101M10
C	403		CKSQYB105K16
C	404		CKSYB475K10
C	406		CEJQ470M10
C	408		CKSYB475K10
C	409		CEJQ1R0M50
C	411		CCSRCH101J50
C	412		CCSRCH470J50
C	601		CEJQ4R7M35
C	602		CKSQYB105K16
C	603		CEJQ2R2M50
C	604		CCSRCH200J50
C	605		CCSRCH200J50
C	609		CCSRCH101J50
C	644		CEJQ101M10
C	645		CKSRYB473K25
C	646		CCSRCH470J50
C	651		CEJQ101M10
C	652		CKSRYB473K25
C	654		CKSRYB152K50
C	655		CKSRYB152K50
C	657		CCSRCH470J50
C	658	470μF/16V	CCH1183
C	662		CCSRCH471J50
C	755		CKSRYB104K16
C	806		CKSRYB473K25
C	807		CKSRYB473K25
C	811		CKSQYB105K16
C	854		CKSRYB473K25
C	911	470μF/16V	CCH1331
C	912		CKSRYB472K50
C	913		CKSRYB103K50
C	914		CEJQ470M10
C	921		CEJQ221M10
C	922		CKSRYB103K50
C	923		CEJQ101M16
C	931		CEJQ1R0M50

=====Circuit Symbol and No.===Part Name			Part No.

C Unit Number : CWM8605
Unit Name : Keyboard Unit

MISCELLANEOUS

IC	1900	IC	PD6294A
IC	1901	HIC Module	RS-140
Q	1910	Transistor	DTC114EU
D	1902	Diode Network	DA204U
D	1910	LED	NSSW440-9159
D	1912	LED	NSSW440-9159
D	1914	LED	NSSW440-9159
D	1930	LED	CL-195PG-CD
D	1931	LED	CL-195PG-CD
D	1932	LED	CL-195PG-CD
D	1935	LED	CL-195PG-CD
D	1942	LED	CL190UBX
D	1943	LED	CL190UBX
D	1946	LED	CL-195PG-CD
D	1947	LED	CL-195PG-CD
X	1900	Ceramic Resonator 5.00MHz	CSS1547
S	1901	Push Switch	CSG1112
S	1902	Push Switch	CSG1112
S	1903	Switch	CSG1107
S	1904	Switch	CSG1107
S	1905	Switch	CSG1107
S	1906	Switch	CSG1107
S	1907	Switch	CSG1107
S	1908	Switch	CSG1107
S	1909	Switch	CSG1107
S	1910	Switch	CSG1107
S	1911	Push Switch	CSG1112
S	1912	Push Switch	CSG1160
S	1913	Push Switch	CSG1112
S	1914	Push Switch	CSG1160
S	1915	Push Switch	CSG1112
S	1916	Push Switch	CSG1112
S	1917	Push Switch	CSG1111
S	1918	Push Switch	CSG1111
S	1950	Encoder	CSD1059
		LCD	CAW1755

RESISTORS

R	1900	RS1/16S222J
R	1901	RS1/16S222J
R	1902	RS1/16S121J
R	1903	RS1/16S2R2J
R	1910	RS1/16S101J
R	1912	RS1/16S680J
R	1914	RS1/16S181J
R	1915	RS1/16S181J
R	1919	RS1/16S101J
R	1930	RS1/16S560J
R	1932	RS1/16S560J
R	1934	RS1/16S560J
R	1936	RS1/16S560J
R	1938	RS1/16S330J
R	1939	RS1/16S680J
R	1940	RS1/16S560J
R	1941	RS1/16S151J
R	1942	RS1/16S0R0J
R	1943	RS1/16S151J
R	1950	RS1/16S472J
R	1960	RS1/16S473J

=====Circuit Symbol and No.===Part Name Part No.

CAPACITORS

C	1900	CKSRYB104K16
C	1901	CKSYF106Z10
C	1902	CKSRYB104K16
C	1903	CKSRYB104K16
C	1904	CKSRYB104K16
C	1910	CKSRYF104Z25
C	1911	CKSRYF104Z25
C	1913	CKSRYF104Z25
C	1942	CKSRYF104Z25
C	1943	CKSRYF104Z25

B Unit Number : CWM8758
Unit Name : Panel Unit

MISCELLANEOUS

D	1970	LED	CL220PGC
S	1970	Push Switch(EJECT)	CSG1112

RESISTORS

R	1970	RS1/16S101J
R	1971	RS1/16S101J
R	1972	RS1/16S0R0J

CAPACITORS

C	1970	CKSRYB104K16

D Unit Number : CWX2743
Unit Name : CD Core Unit(S10MP3)

MISCELLANEOUS

IC	201	IC	UPD63760GJ
IC	202	IC	MSM51V4265EP-70TS
IC	203	IC	BA033SFP
IC	301	IC	BA5996FM
IC	501	IC	UPD61002GC
IC	502	IC	BA25BC0WFP
IC	701	IC	PE5352B
IC	702	IC	TC74VHCT08AFT
IC	703	IC	S-818A33AUC-BGN
Q	101	Transistor	2SB1132
Q	601	Transistor	DTC323TK
Q	602	Transistor	DTC323TK
Q	603	Transistor	2SB709A
Q	701	Transistor	UN2111
D	101	Diode	1SS355
D	201	Diode	1SR154-400
D	501	Diode	1SR154-400
D	601	Diode	MA152WA
L	201	Inductor	CTF1386
L	202	Inductor	CTF1386
L	204	Inductor	CTF1386
L	205	Inductor	CTF1386
L	206	Inductor	CTF1386
L	207	Inductor	CTF1386
L	208	Inductor	CTF1386
L	209	Inductor	CTF1386
L	211	Inductor	CTF1386
L	212	Inductor	CTF1386
L	501	Inductor	CTF1386
L	502	Inductor	CTF1386
L	503	Inductor	CTF1386
L	701	Inductor	CTF1386
L	702	Inductor	LCYBR22J1608
L	703	Inductor	CTF1386
L	704	Inductor	CTF1386

Circuit Symbol	No.	Part Name	Part No.
TH	701	Thermistor	CCX1037
X	201	Ceramic Resonator 16.934MHz	CSS1603
X	202	Ceramic Resonator 24.57MHz	CSS1615
X	701	Ceramic Resonator 16.00MHz	CSS1616
S	901	Switch(HOME)	CSN1051
S	902	Switch(CLAMP)	CSN1051
S	903	Spring Switch(DSCSNS)	CSN1052
S	904	Switch(12EJ)	CSN1051
S	905	Switch(8EJ)	CSN1051

RESISTORS

Circuit Symbol	No.	Part Name	Part No.
R	101		RS1/10S1R5J
R	102		RS1/10S1R5J
R	103		RS1/10S1R5J
R	104		RS1/10S1R5J
R	105		RS1/10S1R5J
R	201		RS1/16SS102J
R	202		RS1/16SS333J
R	203		RS1/16SS333J
R	204		RS1/16SS333J
R	206		RS1/16SS0R0J
R	208		RS1/16SS0R0J
R	210		RS1/16SS0R0J
R	212		RS1/16SS221J
R	213		RS1/16SS1002D
R	214		RS1/16SS1002D
R	215		RS1/16SS6801D
R	216		RS1/16SS6801D
R	217		RS1/16SS1002D
R	218		RS1/16SS1002D
R	219		RS1/16SS1002D
R	220		RS1/16SS1002D
R	221		RS1/16SS103J
R	222		RS1/16SS103J
R	223		RS1/16SS103J
R	224		RS1/16SS103J
R	225		RS1/16SS103J
R	226		RS1/16SS393J
R	227		RS1/16SS103J
R	228		RS1/16SS182J
R	229		RS1/16SS103J
R	231		RS1/16SS0R0J
R	232		RS1/16SS182J
R	233		RS1/16SS0R0J
R	237		RS1/16SS104J
R	238		RS1/16SS473J
R	240		RS1/16SS0R0J
R	241		RS1/16SS221J
R	301		RS1/16SS183J
R	302		RS1/16SS822J
R	303		RS1/16SS0R0J
R	304		RS1/16SS183J
R	305		RS1/16SS822J
R	306		RS1/16SS0R0J
R	307		RS1/16SS183J
R	308		RS1/16SS822J
R	309		RS1/16SS183J
R	310		RS1/16SS822J
R	311		RS1/16SS0R0J
R	501		RS1/16SS221J
R	502		RS1/16SS221J
R	503		RS1/16SS221J
R	504		RAB4CQ223J
R	505		RAB4CQ223J
R	506		RAB4CQ223J
R	507		RS1/16SS223J

Circuit Symbol	No.	Part Name	Part No.
R	508		RS1/16SS223J
R	509		RS1/16SS102J
R	510		RS1/16SS223J
R	511		RS1/16SS223J
R	512		RS1/16SS223J
R	601		RS1/16S101J
R	602		RS1/16S101J
R	603		RS1/16S223J
R	604		RS1/16S223J
R	605		RS1/16SS103J
R	707		RS1/16SS0R0J
R	708		RS1/16SS102J
R	709		RS1/16SS102J
R	710		RS1/16SS102J
R	711		RS1/16SS102J
R	712		RS1/16SS102J
R	713		RS1/16SS102J
R	714		RS1/16SS473J
R	715		RAB4CQ221J
R	716		RAB4CQ221J
R	717		RAB4CQ221J
R	718		RAB4CQ221J
R	719		RAB4CQ221J
R	720		RS1/16SS471J
R	721		RS1/16SS471J
R	722		RAB4CQ221J
R	723		RS1/16SS102J
R	724		RN1/16SE1302D
R	725		RS1/16SS222J
R	726		RS1/16SS103J
R	727		RS1/16SS473J
R	728		RS1/16SS473J
R	729		RS1/16SS223J
R	730		RS1/16SS473J
R	731		RS1/16SS104J
R	732		RS1/16SS104J
R	733		RS1/16SS104J
R	737		RAB4CQ473J
R	739		RAB4CQ473J
R	740		RS1/16SS473J
R	741		RS1/16SS104J
R	742		RS1/16SS104J
R	745		RS1/16SS473J
R	746		RS1/16SS104J
R	747		RS1/16SS104J
R	748		RS1/16SS104J
R	754		RS1/16SS102J
R	755		RS1/16SS102J
R	756		RS1/16SS104J
R	801		RS1/16SS104J
R	802		RS1/16SS473J
R	803		RS1/16SS273J
R	901		RS1/16SS221J
R	902		RS1/16SS221J
R	903		RS1/16SS221J
R	904		RS1/16SS221J
R	905		RS1/16SS221J
R	906		RS1/16SS221J

CAPACITORS

Circuit Symbol	No.	Part Name	Part No.
C	101		CKSSYB104K10
C	102		CKSSYB104K10
C	103		CEV101M16
C	104		CEV101M4
C	105		CKSSYB104K10

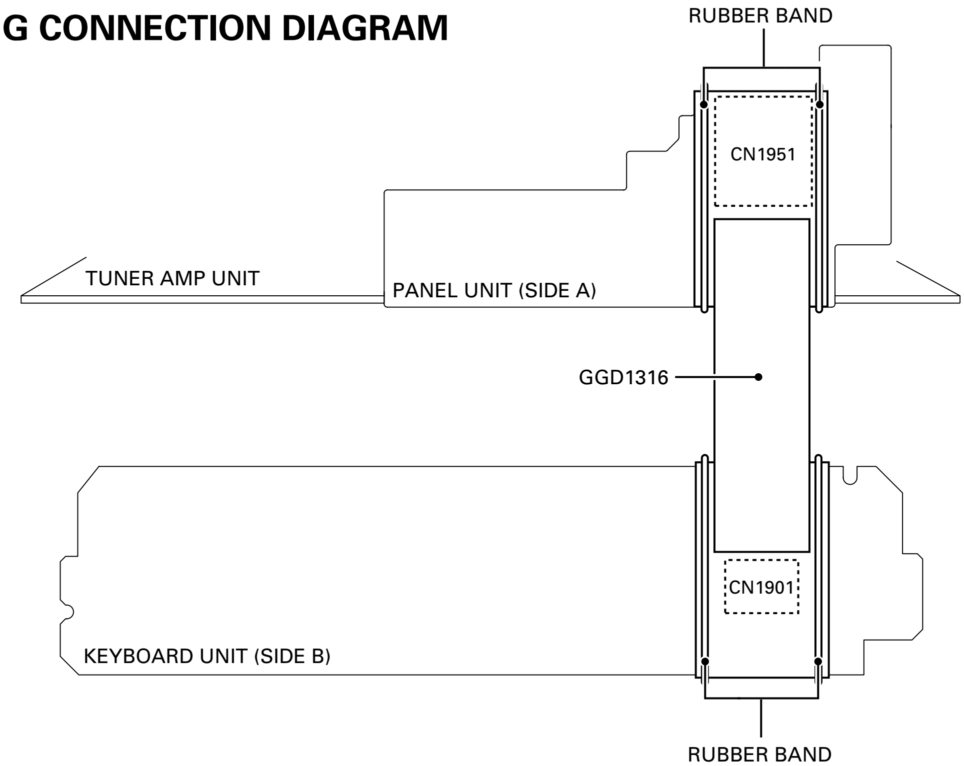
Circuit Symbol	No.	Part Name	Part No.
C	106		CCSRCH101J50
C	108		CKSSYB104K10
C	109		CEV100M16
C	201		CKSSYB471K50
C	202		CKSSYB104K10
C	203		CKSSYB104K10
C	204		CEV220M6R3
C	205		CKSSYB103K16
C	206		CKSSYB103K16
C	207		CEV221M4
C	208		CKSSYB104K10
C	209		CKSSYB104K10
C	210		CKSSYB104K10
C	211		CKSSYB104K10
C	216		CKSSYB332K50
C	217		CKSSYB104K10
C	218		CKSSYB223K16
C	219		CKSSYB104K10
C	220		CKSSYB103K16
C	221		CKSSYB104K10
C	222		CCSSCH270J50
C	223		CCSSCJ3R0C50
C	224		CKSSYB104K10
C	225		CKSSYB103K16
C	226		CCSSCH680J50
C	227		CCSSCH470J50
C	228		CKSSYB682K25
C	230		CKSSYB104K10
C	232		CKSSYB104K10
C	233	47μF/6.3V	CCH1436
C	234		CEV221M4
C	235		CKSRYB224K16
C	237		CKSSYB104K10
C	238		CKSSYB104K10
C	239		CCSSCH9R0D50
C	242		CKSSYB104K10
C	243		CKSSYB104K10
C	245		CKSSYB104K10
C	246		CKSSYB104K10
C	301		CKSSYB331K50
C	302		CKSSYB331K50
C	303		CKSSYB472K25
C	304		CKSSYB472K25
C	305		CEV101M16
C	306		CKSRYB224K16
C	501		CKSSYB104K10
C	502		CKSSYB471K50
C	503		CKSSYB104K10
C	504	47μF/6.3V	CCH1436
C	505		CKSRYB224K16
C	506		CKSSYB104K10
C	508		CKSSYB104K10
C	509		CKSSYB104K10
C	510		CKSSYB104K10
C	511		CKSSYB104K10
C	601		CCSRCH102J50
C	602		CCSRCH102J50
C	603	4.7μF/25V	CCH1508
C	604	4.7μF/25V	CCH1508
C	701		CKSSYB104K10
C	702		CKSSYB471K50
C	703		CKSSYB103K16
C	704		CEV1R0M50
C	705		CKSSYB104K10
C	706		CKSSYB471K50
C	707		CKSSYB104K10
C	708		CKSSYB104K10
C	709		CKSSYB103K16
C	710		CKSSYB104K10
C	711	10μF/10V	CCH1349
C	712		CKSRYB224K16
C	713		CKSSYB104K10
C	714		CKSSYB104K10
C	715		CKSSYB103K16
C	716		CKSSYB103K16
C	901		CKSSYB104K10
C	903		CCSRCH101J50

Miscellaneous Parts List

Circuit Symbol	No.	Part Name	Part No.
		Pickup Unit(Service)(P10)	CXX1641
M	1	Motor Unit(SPINDLE)	CXB6007
M	2	Motor Unit(LOADING/CARRIAGE)	CXB8933

6. ADJUSTMENT

6.1 JIG CONNECTION DIAGRAM



6.2 CD ADJUSTMENT

1) Cautions on adjustments

• In this product the single voltage (3.3V) is used for the regulator. The reference voltage is the REFO1 (1.65V) instead of the GND.

If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:

a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.

b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.

c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.

• To enter the test mode.

While pressing the 4 and 6 keys at the same time, reset.

• To exit from the test mode.

Turn off the ACC and back up.

Notes:

a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.

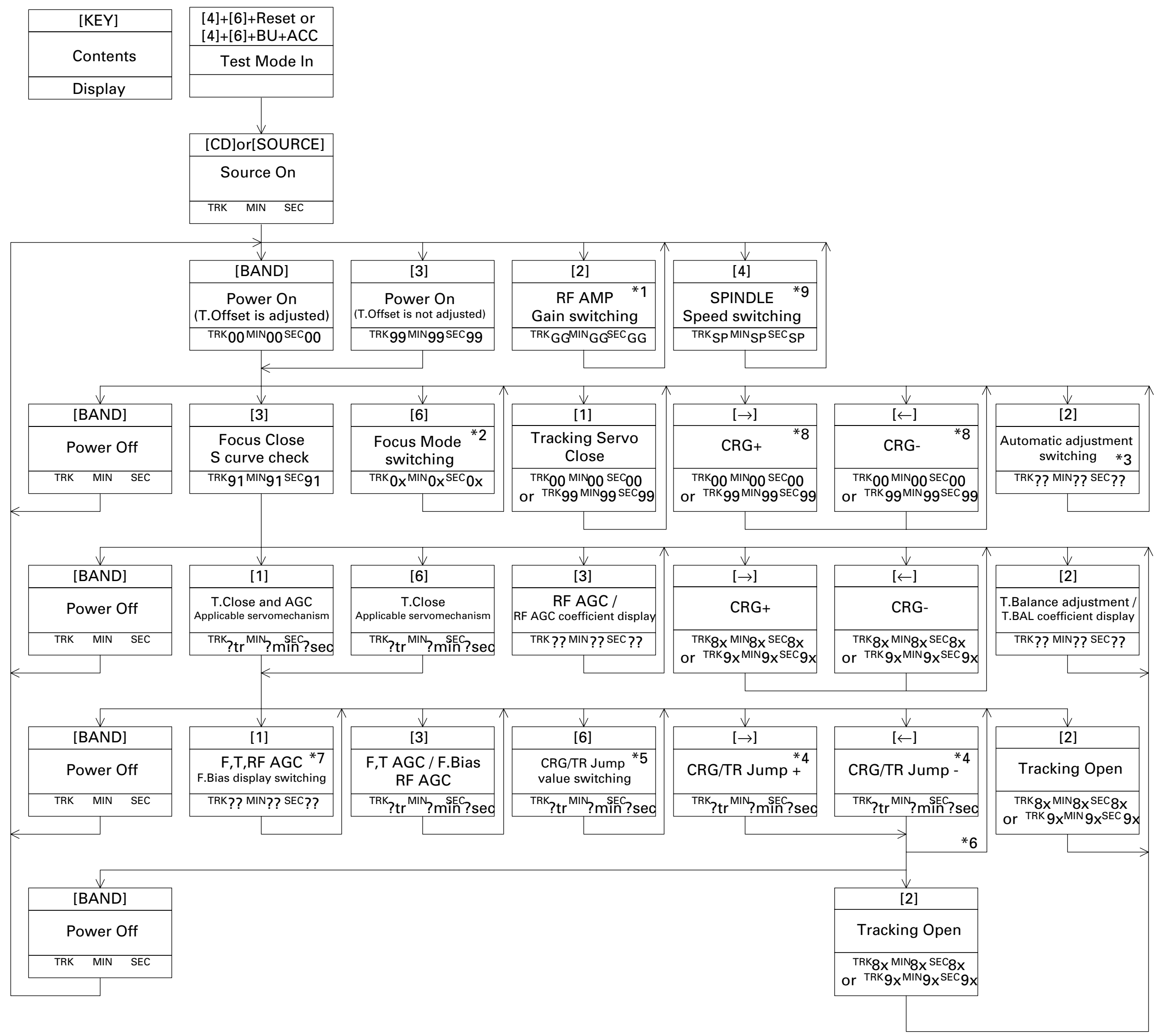
b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.

c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.

d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.

e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0dB, and the auto-adjustment values are reset to the default settings.

● Flow Chart



*1) TYP → -6dB → -12dB
TRK MIN SEC — TRK 06 MIN 06 SEC 06 — TRK 12 MIN 12 SEC 12

*2) Focus Close → S.Curve check setting → F EQ measurement setting
TRK 00 MIN 00 SEC 00 (TRK 99 MIN 99 SEC 99) — TRK 01 MIN 01 SEC 01 — TRK 02 MIN 02 SEC 02

*3) F.Offset Display → T.Offset Display → Switch to the order of the original display

*4) 1TR / 32TR / 100TR

*5) Single TR → 32TR → 100TR → CRG Move
9x(8x) : 91(81) 92(82) 93(83) 94(84)

*6) Only at the time of CRG move, 100TR jump

*7) TRK/MIN/SEC → F.AGC → T.AGC → F Bias → RF AGC

*8) CRG motor voltage = 2[V]

*9) Applicability : A, B, C, D, E, F
TYP(1X) → 2X → 1X
TRK MIN SEC — TRK 22 MIN 22 SEC 22 — TRK 11 MIN 11 SEC 11

As for the double speed (2x), audio output cannot be supported

Applicability : G
TYP(2X) → 1X → 2X
TRK MIN SEC — TRK 11 MIN 11 SEC 11 — TRK 22 MIN 22 SEC 22

[Key]	Operation / Test Mode	
[BAND]	Power On / Off	
[→]	CRG + / TR Jump + (Direction of the external surface)	
[←]	CRG - / TR Jump - (Direction of the internal surface)	
[1]	U.CLS and AGC and Applicable servomechanism / AGC, AGC display setting	
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open	
[3]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC	
[4]	SPDL 1X / 2X switching As for the double speed (2x), audio output cannot be supported.	
[5]	Error Rate measurement	1st - ON : ERR count Beginning (30Sec) 2nd - ON : BER display data [%]
[6]	F.Mode switching / Tracking Close / CRG • TR Jump switching	

6.3 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

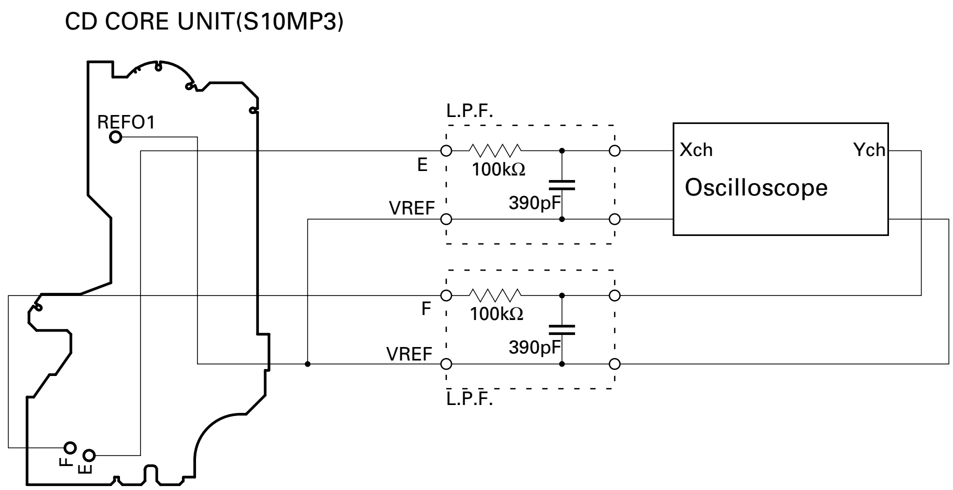
- **Note :**
  The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

- **Purpose :**
  To check that the grating is within an acceptable range when the PU unit is changed.

- **Symptoms of Mal-adjustment :**
  If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

- **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO1
• Disc	• ABEX TCD-782
• Mode	• TEST MODE



- **Checking Procedure**

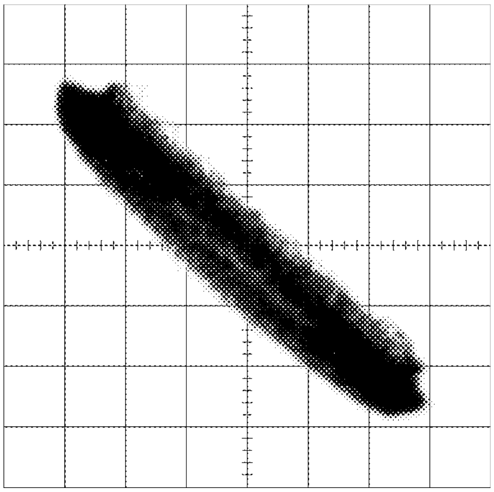
1. In test mode, load the disc and switch the 3V regulator on.
2. Using the → and ← buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

- **Note**
  Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.
- **Hint**
  Reloading the disc changes the clamp position and may decrease the "wobble".

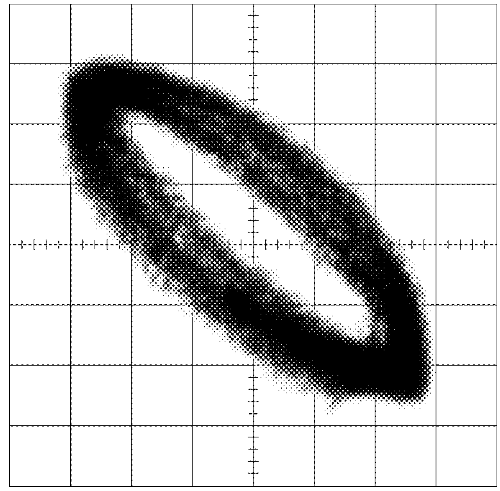
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

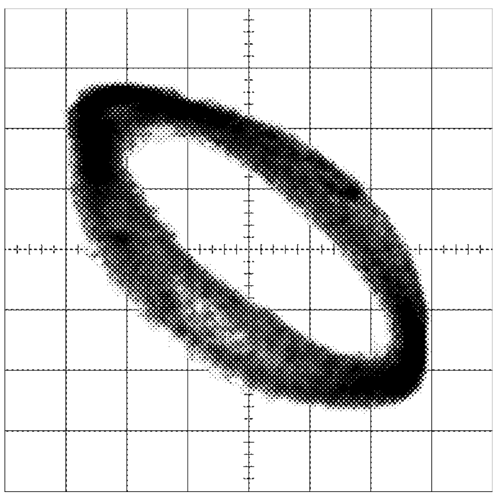
0°



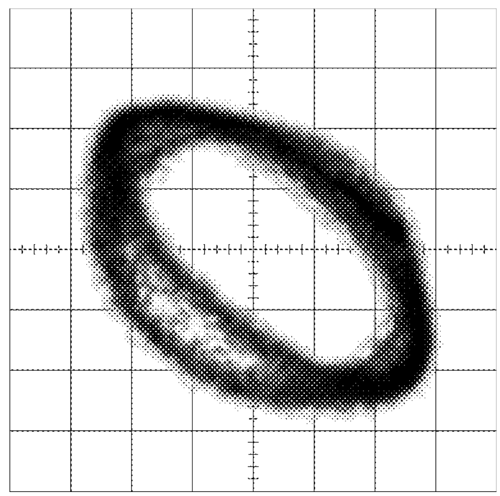
30°



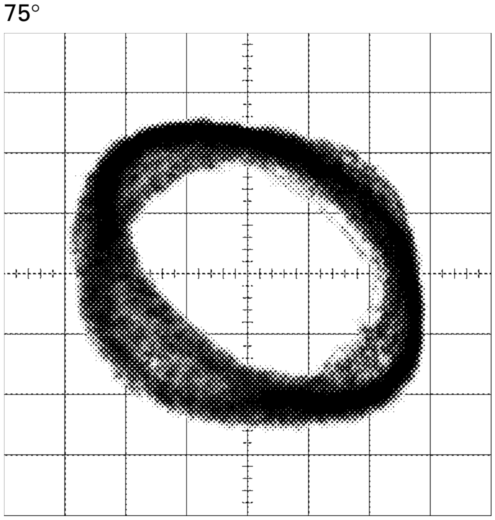
45°



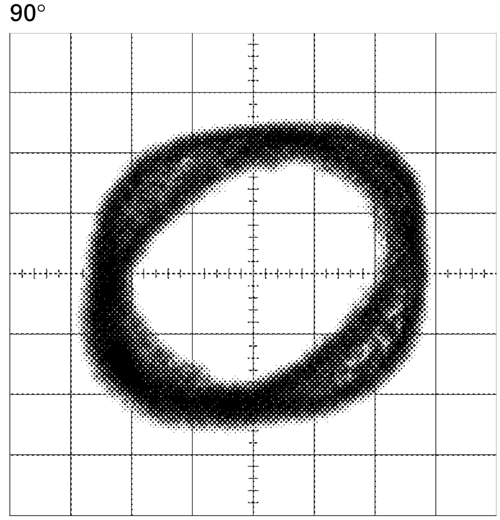
60°



75°



90°



6.4 ERROR MODE

● Error Messages

Error is displayed with number for Error cause when CD is inoperative or stops with Error during operation. The purpose is to reduce nonsense calls from users as well as to assist all related analysis and repair for defects at service station.

(1) Basic Display Method

1) When CSMOD (CD mode area for system) is SERRORM, Error code will be written in DMIN (minutes area for display), DSEC (seconds area for display). The same data shall be written in DMIN and DSEC. DTNO is blank as usual.

2) Display Example of Head Unit

The following is about LCD display ability. xx is Error number.

8 digits	6 digits	4 digits
ERROR–xx	ERR–xx OR Err–xx	E–xx

*) In case of OEM, Error display will follow the specification defined by OEM makers.

(2) Error Code List

No.	Classification	Contents	Details • Cause
10	Electricity	Carriage Home NG	CRG can't move to the inner. CRG can't move from the inner. → HOME SW failure, CRG movement failure.
11	Electricity	Focus Search NG	Focus can't be caught. → Back of Disc / Severe dirt and vibration.
12	Electricity	Spindle Lock NG Subcode NG RF-amp NG	Not spindle, lock. Wrong subcode (can't read). → Defective Spindle. Scratch and dirt on Disc. Intense vibration. The appropriate gain of the RF amp cannot be obtained. → Defective spindle. → Scratched or dirty disc. Severe vibration. Abnormal CD signals. → Blanc CD-R disc. Disc inserted upside down.
17	Electricity	Setup NG	AGC protection doesn't work, out of Focus soon. → Scratch on Disc/Severe dirt and vibration.
22	Disc	Impossible to play	There is no playable MP3 or WMA file present in a disc. → No MP3 or WMA file exists in a CD-ROM disc inserted.
23	Disc	File Format NG	Contents are stored in an incompatible file format. → The contents in a CD-ROM disc inserted are recorded in a file format other than ISO9660 Level-1 and 2.
30	Electricity	Search Time Out	Can't reach the target address. → Defective CRG/tracking, or scratch on Disc.
44	Disc	Impossible to play	There is no playable TRK No. present in a disc. → All TRK Nos. In a disc inserted are specified as a track which should be skipped, in the track skip information.
50	Mecha	Disc Load / Eject NG	Disc loading/ejection cannot be complete. → Foreign objects entered into the mechanism. Disc caught in between during loading/ejection.
A0	System	Power NG	Power supply (VD) isn't connected to the ground. → Defective SW transistor. Abnormal power (failed connector)

Note : Error doesn't display in mechanism only. (CD off causes mechanism off)
If TOC can't be read, error wouldn't occur, but mechanism still continues its operation.
When newly design head unit, be sure to apply as the display examples above.
The upper digits of error code is mainly classified by 3 kinds as follows:
1x: Setup related error, 3x: Search related error, Ax: Other errors.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the Case.

● **Removing the CD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

● **Removing the Grille Assy (Fig.1)**

2 Remove the two screws and then remove the Grille Assy.

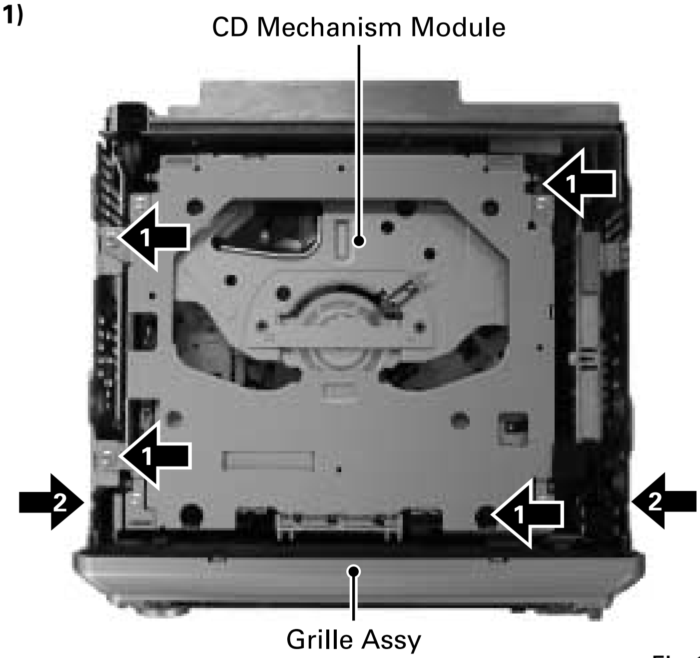


Fig.1

● **Removing the Tuner Amp Unit (Fig.2)**

1 Remove the screw.

2 Remove the three screws.

3 Straight the tabs at three locations indicated.

4 Remove the screw and then remove the Tuner Amp Unit.

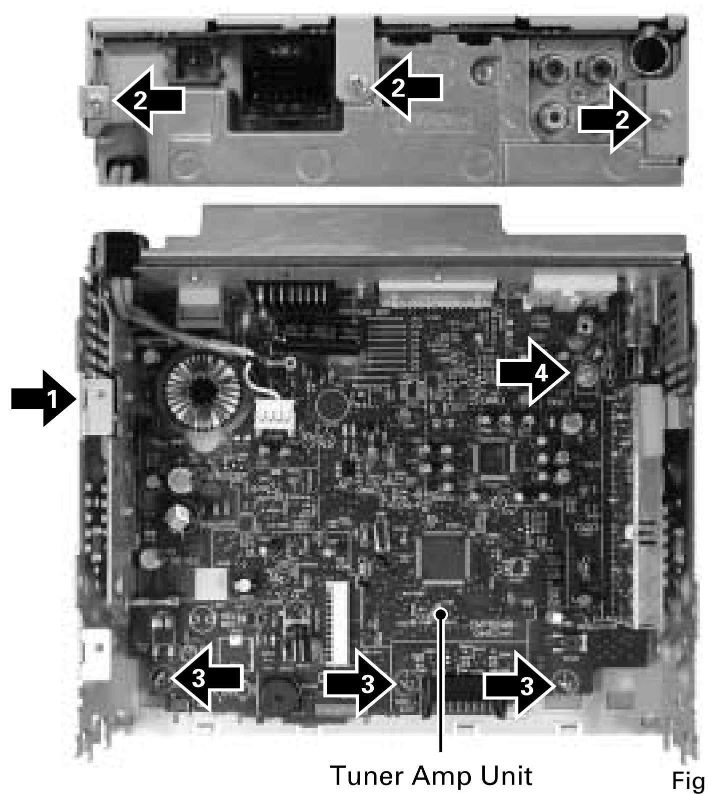
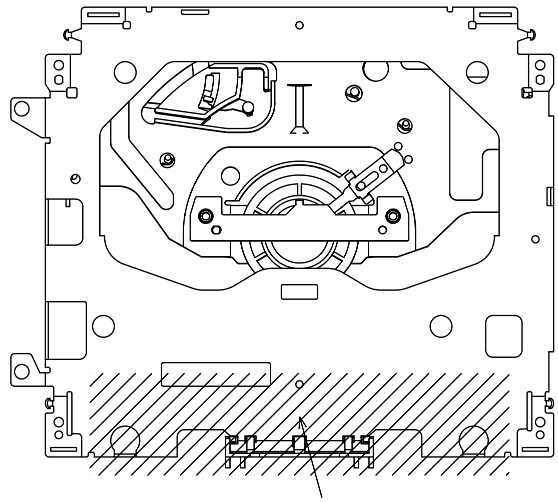


Fig.2

● How to hold the Mechanism Unit

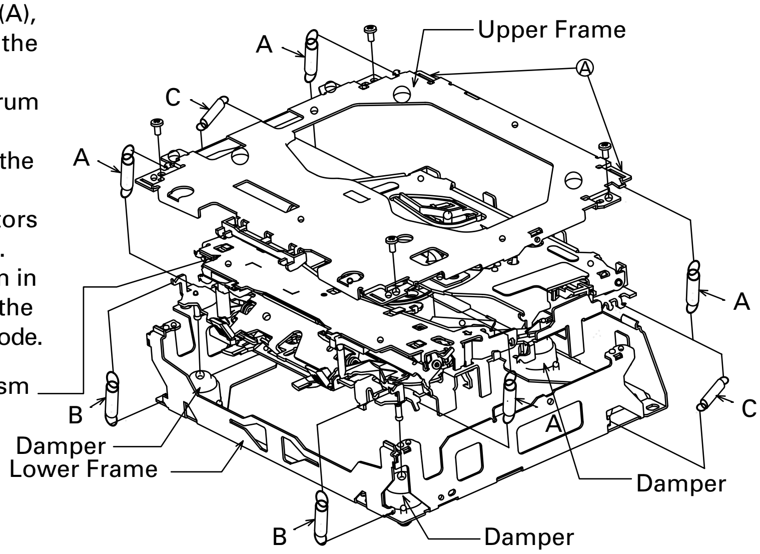
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● Removing the Upper and Lower Frames

1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
2. To remove the upper frame, open it on the fulcrum A.
3. While lifting the carriage mechanism, remove the three dampers.
4. With the frames removed, insert the connectors coming from the main unit and eject the disc.

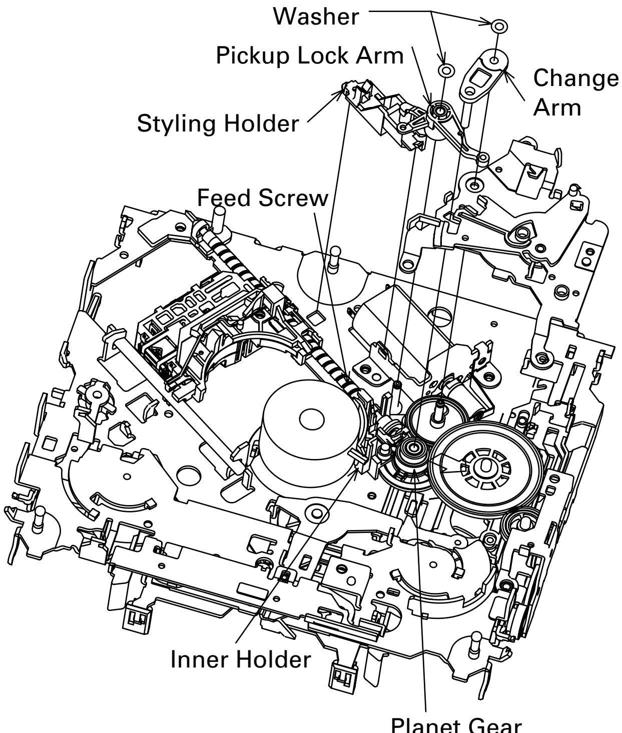
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.



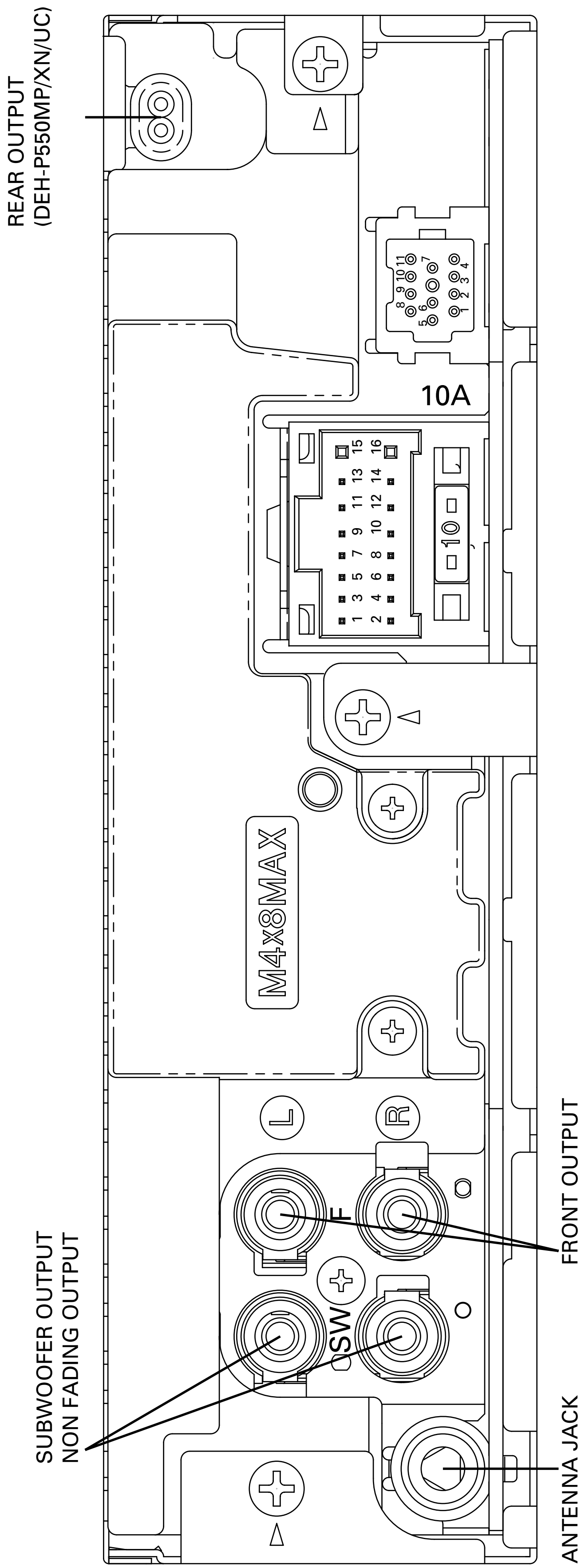
● Removing the Pickup Unit

1. Set the mechanism to the clamp mode.
2. Remove the lead wires from the inner holder.
3. Remove the two washers, styling holder, change arm, and pickup lock arm.
4. While releasing from the hook of the inner holder, lift the end of the feed screw.

Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.



7.1.2 CONNECTOR FUNCTION DESCRIPTION



1. BUS+
2. GND
3. GND
4. NC
5. BUS-
6. GND
7. BUS L+ INPUT
8. ASENB
9. BUS R+ INPUT
10. BUS R- INPUT
11. BUS L- INPUT

1. FR+
2. RR+
3. FR-
4. RR-
5. FL+
6. RL+
7. FL-
8. RL-
9. TEL MUTE
10. NC
11. B.REM
12. ILM
13. NC
14. ACC
15. GND
16. BACK UP

7.2 PARTS

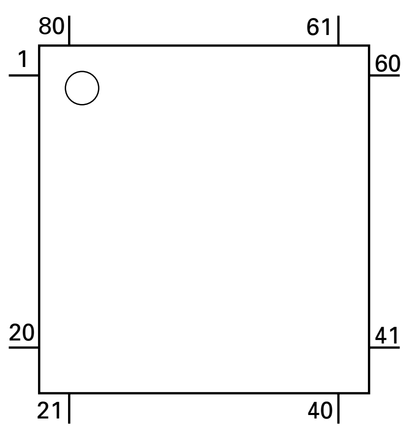
7.2.1 IC

PD6294A
NJM2391DL1-33
PD5800A
MSM51V4265EP-70TS
BA25BC0WFP
UPD63760GJ
UPD61002GC
PE5352B

● Pin Functions (PD6294A)

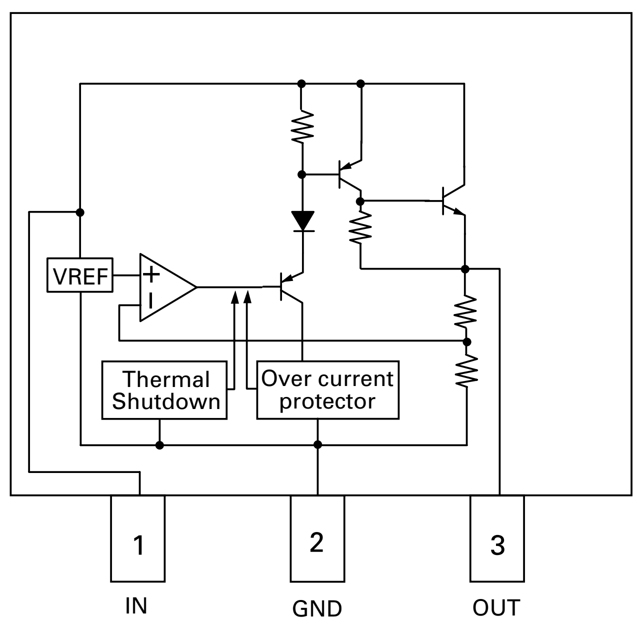
Pin No.	Pin Name	I/O	Function and Operation
1	VSS		GND
2	X1		Crystal oscillator connection pin
3	X0		Crystal oscillator connection pin
4	NC		Not used
5,6	MOD1,0	I	Connect to GND
7	DIMMER	O	Dimmer select output
8	KYDT	O	Key data output
9	DPDT	I	Display data input
10	REMIN	I	Remote control pulse input
11	GRN		Dual Illumination (Green)
12	AMB		Dual Illumination (Amber)
13–16	KD4–1	I	Key data input
17-22	KST6–1	O	Key strobe output
23	VDD		VDD
24-73	SEG49–0	O	LCD segment output
74–77	COM3–0	O	LCD common output
78	VLCD	I	LCD voltage input
79,80	V2,1		Power supply terminal

*PD6294A



IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

NJM2391DL1-33

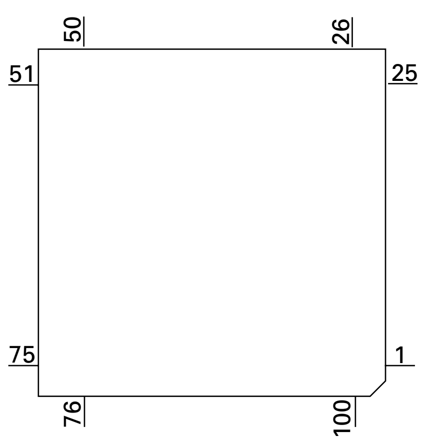


● Pin Functions(PD5800A)

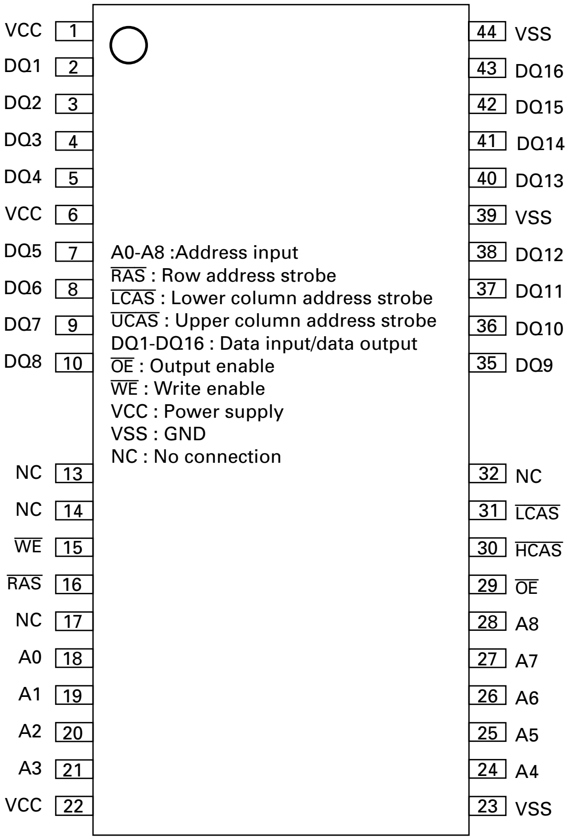
Pin No.	Pin Name	I/O	Function and Operation
1	SYSPW	O	System power control output
2	DORAON	O	Tuner unit power supply output
3-5	NC		Not used
6	BYTE	I	External data bus width change input
7	CNVSS	I	Processor mode change input
8	TELIN	I	TEL : Cellular mute input
9	NC		Not used
10	RESET	I	Reset input
11	XOUT	O	Clock output
12	VSS	I	GND
13	XIN	I	Clock input
14	VCC	I	Power supply input
15-18	NC		Not used
19	RX2	I	IPBUS : Input 2
20	LCDPW	O	Back light power supply output
21	NC		Not used
22	PEE	O	PEE sound output
23	NC		Not used
24	BRST	O	PBUS : Reset output
25	BRXEN	I/O	PBUS : Communication input/output
26	BSRQ	I	PBUS : Communication demand input
27	RX	I	IPBUS : Input
28	TX	O	IPBUS : Output
29	BSO	O	PBUS : Output
30	BSI	O	PBUS : Input
31	BSCK	O	PBUS : Clock
32	NC		Not used
33	DPDT	O	GRILL : Data output
34	KYDT	I	GRILL : Data input
35, 36	ROT1, 0	I	Rotary encoder pulse input1, 0
37	PCL	O	Output for clock adjustment
38	SWVDD	O	GRILL : Chip enable output
39	$\overline{\text{DSENS}}$	I	Detach sense input
40	FLPILM	O	Illumination output inside flap
41	ILMPW	O	Illumination output
42	EJTIN	I	Eject key input
43-55	NC		Not used
56	CSENSOUT	O	CSENS state output(H : FLAP open)
57	EMUTE	O	EVOL : Mute output
58, 59	NC		Not used
60	VCC	I	Power supply input
61	NC		Not used
62	VSS	I	GND
63-66	NC		Not used
67	DALMON	O	For consumption current reduction
68	NC		Not used
69	$\overline{\text{TUNPCE2}}$	O	TUNER : Chip enable output(EEPROM)
70	TUNPCE	O	TUNER : Chip enable output(PLL)
71	$\overline{\text{ROMCS}}$	O	ROM correction : Chip select
72	$\overline{\text{ASENS}}$	I	ACC sense
73	$\overline{\text{BSENS}}$	I	Back up sense
74	ROMCK	O	ROM correction : Clock output
75	ROMDATA	I/O	ROM correction : Data input/output
76	VST	O	EVOL : Strobe output
77	VDT	O	EVOL : Data output
78	VCK	O	EVOL : Clock output
79	IPPW	O	IPBUS : Driver power supply control output
80	ASENBO	O	IPBUS : Slave ACC sense output
81	$\overline{\text{ISENS}}$	I	Illumination sense input
82-84	NC		Not used

Pin No.	Pin Name	I/O	Format Function and Operation
85	MUTE	O	MUTE output
86	TESTIN	I	Test program input
87-89	NC		Not used
90	LVLINR	I	Level indicator R.ch input
91	$\overline{\text{CSENS}}$	I	Flap opening-and-closing sense input
92	LVLINL	I	Level indicator L.ch input
93	MODEL0		Model 0
94	AVSS	I	GND
95	SL	I	TUNER : Signal level input
96	VREF		AD translation reference voltage
97	AVCC	I	AD translation power supply input terminal
98	TUNPDI	I	TUNER : PLL communication
99	TUNPDO	O	TUNER : Data output(PLL)
100	TUNPCK	O	TUNER : Clock output(PLL)

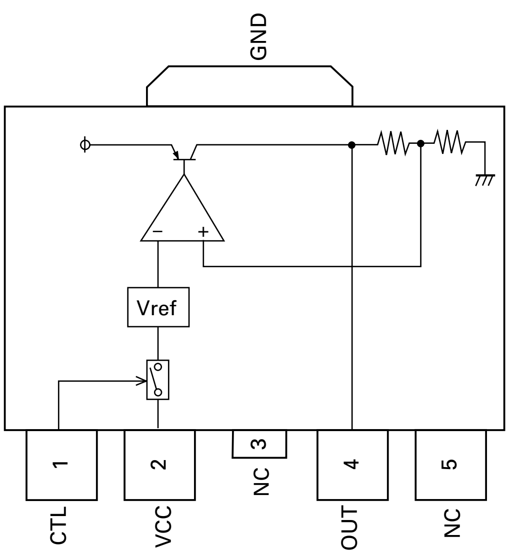
* PD5800A



* MSM51V4265EP-70TS



BA25BC0WFP

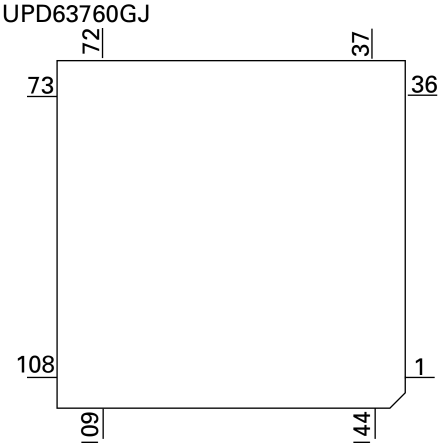


● Pin Functions (UPD63760GJ)

Pin No.	Pin Name	I/O	Function and Operation
1	R.GND		GND for DRAM I/F
2	$\overline{RST}$	I	Input of reset
3-7	AB12-8	I	Address bus 12-8 from the microcomputer
8-15	AD7-0	I/O	Address/data bus 7-0 to the microcomputer
16	$\overline{CS}$	I	Chip selection
17	ASTB	I	Address strobe
18	$\overline{READ}$	I	Control signals (read)
19	$\overline{WRITE}$	I	Control signals (write)
20	$\overline{WAIT}$	O	Control signals (wait)
21	INTQ		Interruption signals to the external microcomputer
22	IFMODE	I	Switching between the data buses (16bit/8bit)
23	D.VDD		Power supply for digital circuits
24	$\overline{XTALEN1}$	I	Permission to oscillate 16.9344MHz
25	$\overline{XTALEN2}$	I	Permission to oscillate 24.576MHz
26	DA.VDD		Power supply for DAC
27	ROUT	O	Output of audio for the right channel
28	DA.GND		GND for DAC
29	R+	O	Output of the right channel audio PWM
30	R-	O	Output of the right channel audio PWM
31	REGC		Connected to the capacitor for band gap
32	L-	O	Output of the left channel audio PWM
33	L+	O	Output of the left channel audio PWM
34	DA.GND		GND for DAC
35	LOUT	O	Output of audio for the left channel
36	DA.VDD		Power supply for DAC
37	X.VDD		Power supply for the crystal oscillator
38	XTAL1		Connected to the crystal oscillator (16.9344MHz)
39	$\overline{XTAL1}$		Connected to the crystal oscillator (16.9344MHz)
40, 41	X.GND		Ground for the crystal oscillator
42	$\overline{XTAL2}$		Connected to the crystal oscillator (24.576MHz)
43	XTAL2		Connected to the crystal oscillator (24.576MHz)
44	X.VDD		Power supply for the crystal oscillator
45	D.GND		GND for digital circuits
46	DIN	I	Input of audio data
47	DOUT	O	Output of audio data
48	SCKIN	I	Clock input for audio data
49	SCKO	O	Clock output for audio data
50	LRCKIN	I	Input of LRCK for audio data
51	LRCK	O	Output LRCK for audio data
52	TESTX	O	Output for tests
53	RFOK	O	Output of RFOK
54	C16M	O	Output of 16.9344MHz
55	TESTEN	I	Connected to GND
56	TEST4	I	Connected to GND
57	D.VDD		Power supply for digital circuits
58	RFCK/HOLD	O	Output of RFCK/HOLD signal
59	WFCK/MIRR	O	Output of WFCK/MIRR signal
60	PLCK	O	Output of PLCK
61	LOCK	O	Output of LOCK
62	C1D1	O	Information on error correction
63	C1D2	O	Information on error correction
64	C2D1(RMUTE)	O	Information on error correction (mute for Rch)
65	C2D2(LMUTE)	O	Information on error correction (mute for Lch)
66	C2D3	O	Information on error correction
67	D.GND		Ground for digital circuits
68	$\overline{RAS}$	O	Output of DRAM RAS
69	$\overline{CAS0}$	O	Output of DRAM Lower CAS
70	$\overline{CAS1}$	O	Output of DRAM Upper CAS
71	$\overline{WE}$	O	Output of DRAM WE
72	$\overline{OE}$	O	Output of DRAM OE

Pin No.	Pin Name	I/O	Function and Operation
73-88	RDB0-15	I/O	Input/output of DRAM Data0-15
89	D.GND		Ground for digital circuits
90-99	RA0-9	O	Output of DRAM Address0-9
100	D.VDD		Power supply for digital circuits
101-104	TEST0-3	I	Connected to GND
105	FD	O	Output of focus drive PWM
106	TD	O	Output of tracking drive PWM
107	SD	O	Output of thread drive PWM
108	MD	O	Output of spindle drive PWM
109	A.VDD		Power supply for the analog system
110	ATEST	O	Analog tests
111	EFM	O	Output of EFM signals
112	ASY	I	Input of asymmetry
113	C3T		Connection to the capacitor for detecting 3T
114	A.GND		Ground for the analog system
115	RFI	I	Input of RF
116	AGCO	O	Output of RF
117	AGCI	I	Input of AGC
118	RFO	O	Output of RF(AGC)
119, 120	EQ2, 1		Equalizer 2, 1
121	RF2-	I	Reversal input of RF2
122	RF-	I	Reversal input of RF
123	A.GND		Ground for the analog system
124	A	I	Input of A
125	C	I	Input of C
126	B	I	Input of B
127	D	I	Input of D
128	F	I	Input of F
129	E	I	Input of E
130	A.VDD		Power supply for the analog system
131	REFOUT	O	Output of reference voltage
132	REFC		Connected to the capacitor for output of REFOUT
133	FE-	I	Reversal input of FE
134	FEO	O	Output of FE
135	TE-	I	Reversal input of TE
136	TEO	O	Output of TE
137	TE2	O	TE2
138	TEC	I	TEC
139	A.GND		Ground for the analog system
140	LDREGO	O	Output of REG voltage for APC
141	PD	I	Input of PD
142	LD	O	Output of LD
143	PN	I	Assignment of pickup polarity
144	A.VDD		Power supply for the analog system

* UPD63760GJ

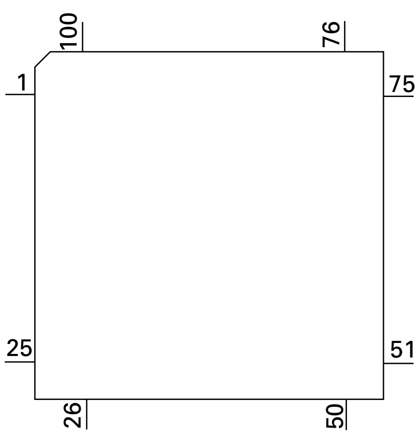


● Pin Function (UPD61002GC)

Pin No.	Pin Name	I/O	Function and Operation
1	VDD3	I/O	Power supply (3.3V)
2-4	NC		Not used
5	GND3		GND
6,7	NC		Not used
8	DO0	O	PCM output data
9	VDD2		Power supply (2.5V)
10	CKI	I	Clock input
11	DVDD		Power supply (PLL) (Digital)
12	AVDD		Power supply (PLL) (Analog)
13	AGND		GND (PLL) (Analog)
14	DGND		GND (PLL) (Digital)
15	VDD3I		Interface terminal protection
16	LRCKO	O	PCM output LRCK
17	BCKO	O	PCM output bit clock
18	NC		Not used
19	VDD3		Power supply (3.3V)
20	GND2		GND
21	MCK44	I	Audio master clock input
22	MCK48	I	Audio master clock input
23,24	P10, 11	I/O	Port
25	VDD2		Power supply (2.5V)
26	GND3		GND
27-32	P12-17	I/O	Port
33	VDD2		Power supply (2.5V)
34	P00/INTP00	I/O	Port
35,36	NC		Not used
37	P03/INTP03	I/O	Port
38	P04/INTP04	I/O	Port
39	P05/INTP05	I/O	Port
40	GND2		GND
41,42	P06, 07	I/O	Port
43	VDD3		Power supply (3.3V)
44-49	HAD0-5	I/O	Host address / Data bus
50	GND3		GND
51	VDD3		Power supply (3.3V)
52-55	HAD6-9	I/O	Host address / Data bus
56	GND3		GND
57-59	HAD10-12	I/O	Host address / Data bus
60	VDD2		Power supply (2.5V)
61-63	HAD13-15	I/O	Host address / Data bus
64	VDD3		Power supply (3.3V)
65	HAST	I	Host address strobe
66	HCSB	I	Host chip select
67	HR/WB	I	Host read / Write status
68	HDSTB	I	Host data strobe
69	GND2		GND
70	NC		Not used
71	EXTDIR	I	Bus direction flag from external
72,73	DBBWRDY0, 1	O	DBB write ready flag
74	DBBRRDY0	O	DBB read ready flag
75	VDD2		Power supply (2.5V)
76	GND3		GND
77	DBBRRDY1	O	DBB read ready flag
78	GND3		GND
79	RESETB	I	Reset
80	GND3		GND
81	VDD3		Power supply (3.3V)
82	GND3		GND
83	PLLCONT	I	PLL control
84	GND3		GND

Pin No.	Pin Name	I/O	Function and Operation
85	NC		Not used
86	GND2		GND
87	DI3	I	PCM input data
88	LRCKI3	I	PCM input LRCK
89	BCKI3	I	PCM input bit clock
90	DI2	I	PCM input data
91	LRCKI2	I	PCM input LRCK
92	BCKI2	I	PCM input bit clock
93	DI1	I	PCM input data
94	LRCKI1	I	PCM input LRCK
95	BCKI1	I	PCM input bit clock
96	VDD2		Power supply (2.5V)
97	DI0	I	PCM input data
98	LRCKI0	I	PCM input LRCK
99	BCKI0	I	PCM input bit clock
100	GND2		GND

*UPD61002GC

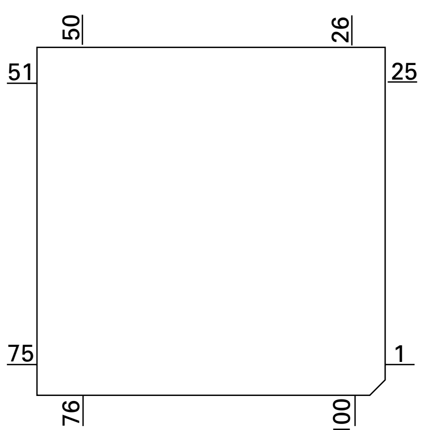


● Pin Functions (PE5352B)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	BSO	O	C	P-Bus serial data output
2	BSCK	I/O	/C	P-Bus serial clock input/output
3, 4	DFS1, 2	O	C	DA I/F IC sampling frequency setting output 1, 2
5	DCKS	O	C	DA I/F IC clock subharmonic number selection output
6	EVDD			E power supply Positive power supply
7	EVSS			E power supply GND
8	DSPOK	I		DSP microcomputer initialization OK input
9	DCOPY	O	C	DA I/F IC copy flag setting output
10	CRST	O	C	Compression IC reset control output
11, 12	NC			Not used
13	EMPH	O	C	Emphasis information output
14	EMPH	O	C	Emphasis information output
15	DSPMUTE	O	C	DOUT mute output
16	DSET	O	C	Disc set indicator lighting output
17	ADENA	O	C	A/D reference voltage supply control output
18	IC/VPP			IC : VSS direct connection/VPP : Pull-down
19	BRXEN	I/O	/C	P-Bus reception is possible
20	BSRQ	I/O	/C	P-Bus service request demand
21	XTALEN1	O	C	CD LSI 16.9344MHz oscillation permission output
22	XTALEN2	O	C	CD LSI 24.576MHz oscillation permission output
23	XRST	O	C	CD LSI reset control output
24	VDCONT	O	C	VD power supply control output
25	CD3VON	O	C	CD +3.3V power supply control output
26	CONT	O	C	Servo driver power supply control output
27	XWAIT	I		CD LSI wait control signal input
28	LOEJ	O	C	The direction change output of LOAD/EJECT
29	CLCONT	O	C	Driver input change output
30	CDMUTE	O	C	CD mute control output
31	RESET	I		System reset input
32	XT1	I		Connected to the oscillator for subclock (connected to VSS via the resistor)
33	XT2			Connected to the oscillator for subclock (Open)
34	REGC			Connected to the capacity stabilizing output of the regulator (an electrolytic capacitor of about 1µF)
35	X2			Oscillator connection for mainclock
36	X1	I		Oscillator connection for mainclock
37	VSS			GND
38	VDD			Positive power supply (5V)
39	CLKOUT	O	C	Internal system clock output (Open)
40	XWRITE	O		CD LSI write control signal output
41	UBEN	O		Not used (Open)
42	WR/W	O		WMA decoder Read/Write control signal output
43	XREAD	O		CD LSI read control signal output
44	XASTB	O		CD LSI address strobe output
45	LOCK	I		Spindle lock input
46	WRST	O	C	WMA decoder reset control output
47-54	AD0-7	I/O	/C	Address/Data bus 0-7
55	BVDD			B power supply Positive power supply (3.3V)
56	BVSS			B power supply GND
57-64	AD8-15	I/O	/C	Address/Data bus 8-15
65	XCS	O	C	CD LSI chip selection output
66	WCS	O	C	WMA decoder chip selection output
67, 68	DBBWRDY0, 1	I		Input of write-ready flag with WMA decoder DBBI0, 1
69, 70	DBBRRDY0, 1	I		Input of read-ready flag with WMA decoder DBBO0, 1
71	AVDD			A power supply Positive power supply (5V)
72	AVSS			A power supply GND
73	AVREF			The reference voltage input for A/D converter
74	VDSENS			VD power supply short sense input
75	DSCSNS			Disc state sense input
76	TEMP			Temperature information sense input

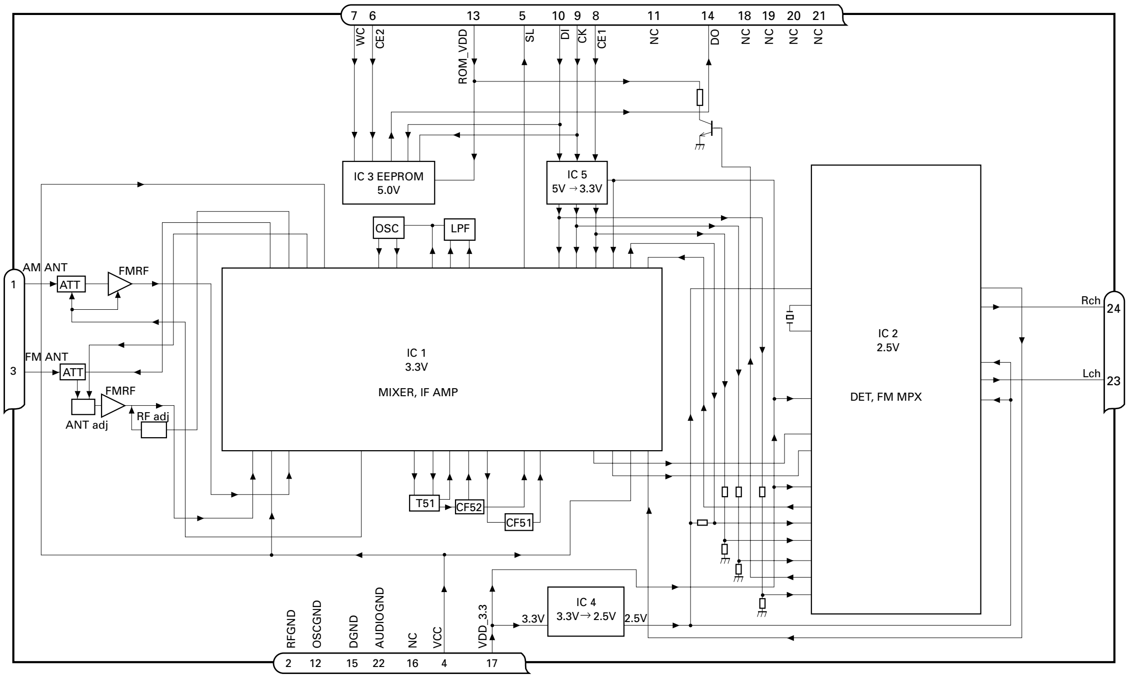
Pin No.	Pin Name	I/O	Format	Function and Operation
77	HOME	I		Home SW sense input
78	$\overline{\text{CSENS}}$	I		Flap closing sense input
79	RFOKIN	I		RFOK input chatter count input
80-82	NC			Connected to AVDD or AVSS via the resistor
83	WMAARI	I		Input of sensing existence of WMA decoder and DA I/F IC
84	TYPE_A/D	I		CD-DA Analog/Digital output change setup
85	$\overline{\text{TESTIN}}$	I		Chip check test program starting input
86	NC			Connected to EVDD or EVSS via the resistor
87	$\overline{\text{XINT}}$			CD LSI interruption signal input
88	$\overline{\text{WINT}}$			WMA decoder interruption signal input
89	$\overline{\text{BRST}}$	I		P-Bus reset input
90	$\overline{\text{EJSW}}$	I		Eject key input
91, 92	NC			Open
93	CLAMP	I	C	CLAMP SW sense input
94	ROMDATA	I/O	/C	E2PROM data input/output
95	ROMCS	O	C	E2PROM chip selection output
96	ROMCK	O	C	E2PROM clock output
97	FRXD	I		For flash rewriting (received signal)
98	FTXD	O	C	For flash rewriting (transmitted signal)
99	AO/DO	O	C	The output for Analog/Digital voice output distinction
100	BSI	I		P-Bus serial data input

* PE5352B



Format	Meaning
C	CMOS

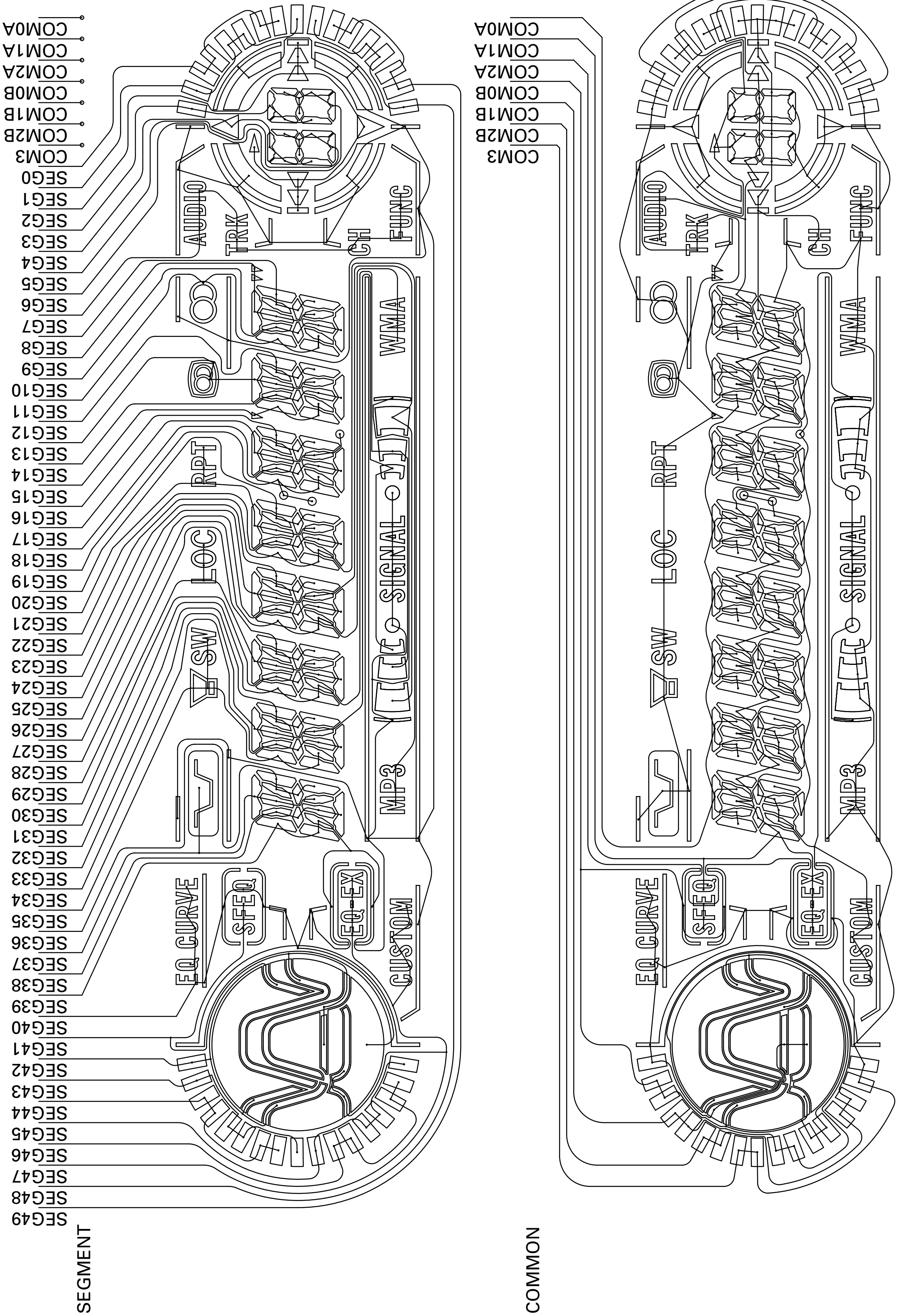
FM/AM Tuner Unit



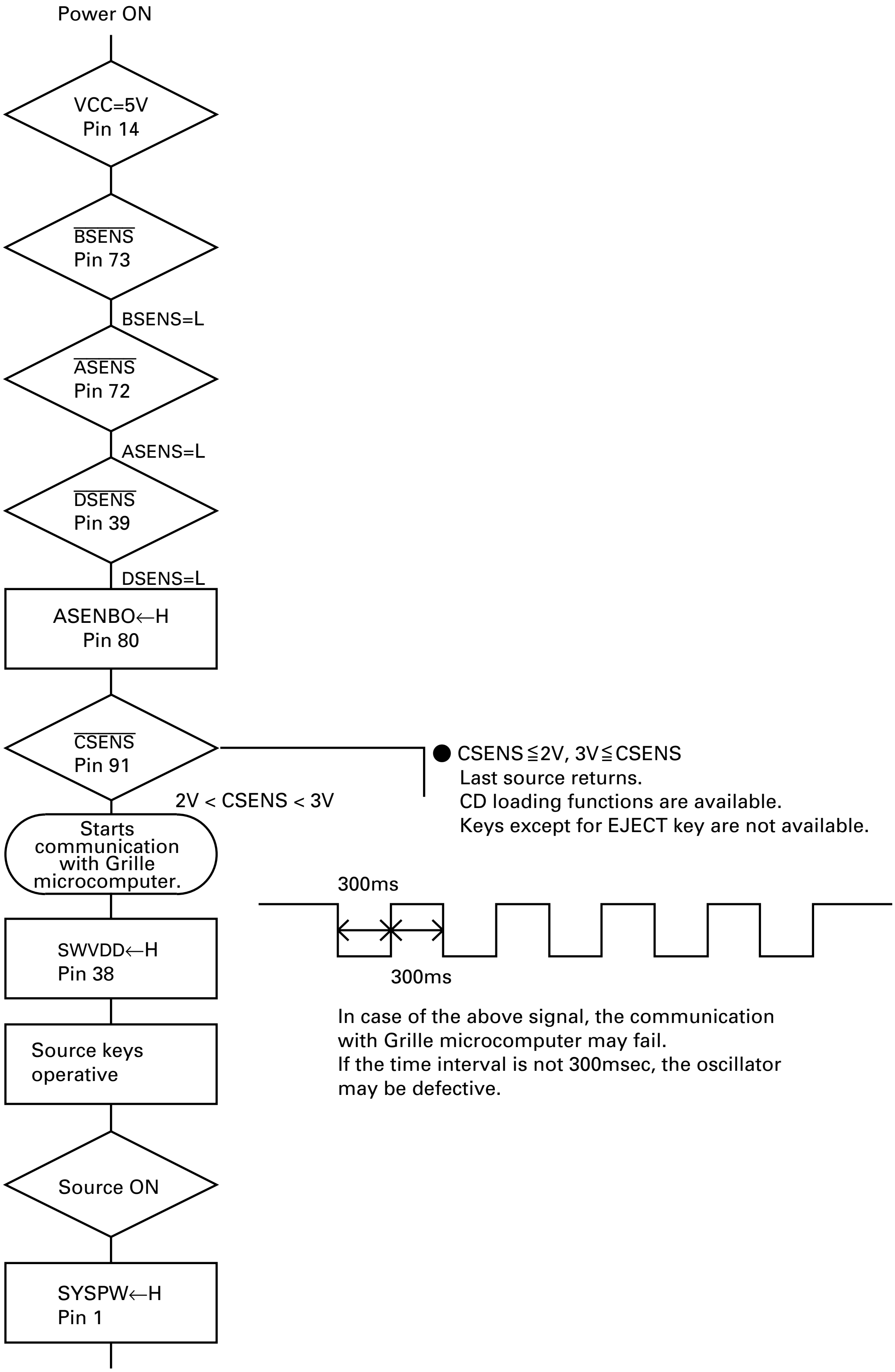
No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the ham of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM "Low" active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is "Low". Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF "High" active
9	CK	I	clock	Clock
10	DI	I	data in	Data input
11	NC		non connection	Not used
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3V ± 0.2V
18	NC		non connection	Not used
19	NC		non connection	Not used
20	NC		non connection	Not used
21	NC		non connection	Not used
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo "L-ch" signal output or AM audio output
24	R ch	O	R channel output	FM stereo "R-ch" signal output or AM audio output

7.2.2 DISPLAY

● **LCD(CAW1755)**



7.3 OPERATIONAL FLOW CHART

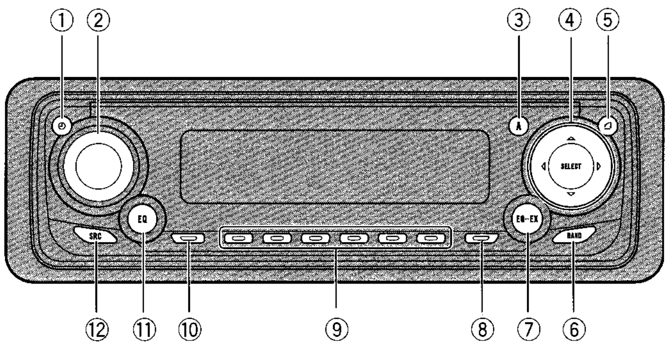


Completes power-on operation.
(After that, proceed to each source operation)

7.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008



Head unit

① **CLOCK button**
Press to change to the clock display.

② **VOLUME**
When you press **VOLUME**, it extends outward so that it becomes easier to turn. To retract **VOLUME**, press it again. Rotate to increase or decrease the volume.

③ **AUDIO button**
Press to select various sound quality controls.

④ **▲/▼/◄/► buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.

⑤ **OPEN button**
Press to open the front panel.

⑥ **BAND button**
Press to select among three FM and one AM bands and cancel the control mode of functions.

⑦ **EQ-EX button**
Press and hold to switch between EQ-EX and SFEQ functions. Press to operate each function.

⑧ **FUNCTION button**
Press to select functions.

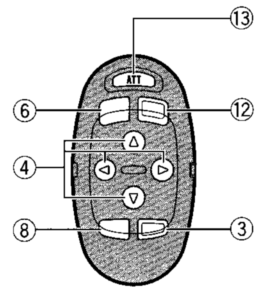
⑨ **1–6 buttons**
Press for preset tuning and disc number search when using a multi-CD player.

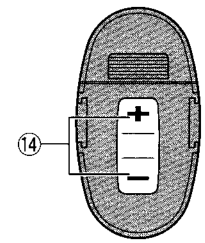
⑩ **DISPLAY button**
Press to select different displays.

⑪ **EQ button**
Press to select various equalizer curves.

⑫ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all of the available sources. ■

Remote control



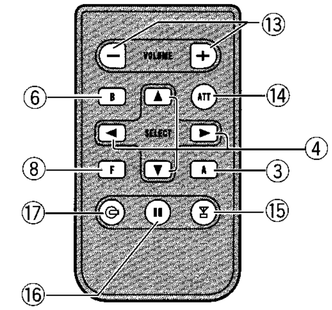


Operation is the same as when using the button on the head unit. See the explanation of the head unit about the operation of each button with the exception of **ATT**, which is explained below.

⑬ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑭ **VOLUME button**
Press to increase or decrease the volume.

Note
If you press **FUNCTION** on the remote control while pressing **BAND** on it, the remote control will not function properly. To cancel this setting, press **AUDIO** on the remote control while pressing **BAND** on it to return to the previous setting. ■



⑬ **VOLUME button**
Press to increase or decrease the volume.

⑭ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑮ **TUNER button**
Press to select the tuner as the source.

⑯ **PAUSE button**
Press to turn pause on or off.

⑰ **CD button**
Press to select the built-in or multi-CD player as the source. ■

Turning the unit on

- **Press SOURCE to turn the unit on.**

When you select a source the unit is turned on. ■

Selecting a source

You can select a source you want to listen to. To switch to the built-in CD player, load a disc in this unit.

- **Press SOURCE to select a source.**

Press **SOURCE** repeatedly to switch between the following sources:
XM tuner—Tuner—Television—Built-in CD player—Multi-CD player—External unit 1—External unit 2—AUX

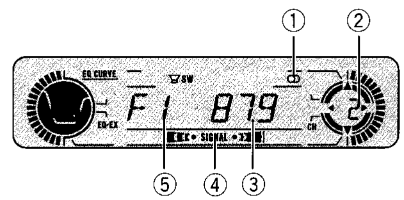
Notes

- In the following cases, the sound source will not change:
  - — When a unit corresponding to each source is not connected to this unit.
  - — When no disc is set in this unit.
  - — When no magazine is set in the multi-CD player.
  - — When the AUX (auxiliary input) is set to off.
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.
- When this unit's blue/white lead is connected to the car's auto-antenna relay control terminal, the car's antenna extends when this unit's source is turned on. To retract the antenna, turn the source off. ■

Turning the unit off

- **Press SOURCE and hold until the unit turns off.** ■

Listening to the radio



These are the basic steps necessary to operate the radio.

① **Stereo (◯◯) indicator**
Shows that the frequency selected is being broadcast in stereo.

② **Preset number indicator**
Shows what preset has been selected.

③ **Frequency indicator**
Shows to which frequency the tuner is tuned.

④ **Signal level indicator**
Shows the radio wave strength.

⑤ **Band indicator**
Shows which band the radio is tuned to, AM or FM.

1 Press SOURCE to select the tuner.
Press **SOURCE** until you see **TUNER** displayed.

2 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

3 Press BAND to select a band.
Press **BAND** until the desired band is displayed, **F1**, **F2**, **F3** for FM or **AM**.

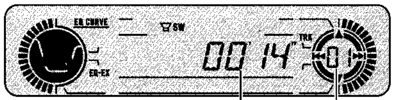
4 To perform manual tuning, press ◄ or ► with quick presses.
The frequencies move up or down step by step.

5 To perform seek tuning, press and hold ◄ or ► for about one second and release.
The tuner will scan the frequencies until a broadcast strong enough for good reception is found.
■ You can cancel seek tuning by pressing either ◄ or ► with a quick press.
■ If you press and hold ◄ or ► you can skip broadcasting stations. Seek tuning starts as soon as you release the buttons.

Note

When the frequency selected is being broadcast in stereo the stereo (◯◯) indicator will light. ■

Playing a CD


① ②

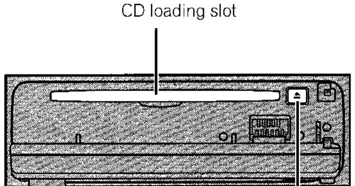
These are the basic steps necessary to play a CD with your built-in CD player.

① **Play time indicator**
Shows the elapsed playing time of the current track.

② **Track number indicator**
Shows the track currently playing.

1 Press OPEN to open the front panel.
CD loading slot appears.
■ After a CD has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD into the CD loading slot.
Playback will automatically start.



■ You can eject a CD by pressing **EJECT**.
■ To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

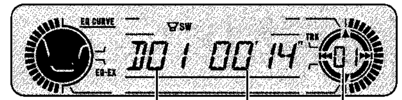
4 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

5 To perform fast forward or reverse, press and hold ◄ or ►.
■ If you select the search method to **ROUGH**, pressing and holding ◄ or ► enables you to search every ten track in the current disc.

6 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

Notes
- The built-in CD player plays one, standard, 12-cm or 8-cm (single) CD at a time. Do not use an adapter when playing 8-cm CDs.
- Do not insert anything other than a CD into the CD loading slot.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- ▲ and ▼ can be operated when MP3 or WMA is playing.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed. Refer to *Understanding built-in CD player error messages* on page 45.
- When a CD TEXT disc is inserted, the disc and track titles begin to scroll to the left automatically. ■

Playing a CD


① ② ③

You can use this unit to control a multi-CD player, which is sold separately.
These are the basic steps necessary to play a CD with your multi-CD player.

① **Disc number indicator**
Shows the disc currently playing.

② **Play time indicator**
Shows the elapsed playing time of the current track.

③ **Track number indicator**
Shows the track currently playing.

1 Press SOURCE to select the multi-CD player.
Press **SOURCE** until you see **MULTI CD** displayed.

2 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

3 Select a disc you want to listen to with the 1–6 buttons.
For discs located at 1 to 6, press the corresponding number button.
If you want to select a disc located at 7 to 12, press and hold the corresponding numbers such as **1** for disc 7, until the disc number appears in the display.
■ You can also sequentially select a disc by pressing ▲/▼.

4 To perform fast forward or reverse, press and hold ◄ or ►.

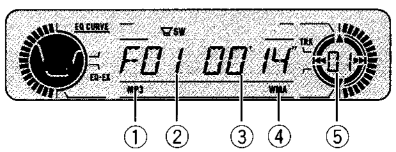
5 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

Notes
- When the multi-CD player performs the preparatory operations, **READY** is displayed.
- If the multi-CD player does not operate properly, an error message such as **ERROR-11** may be displayed. Refer to the multi-CD player owner's manual.
- If there are no discs in the multi-CD player magazine, **NO DISC** is displayed.
- When you select a CD TEXT disc on a CD TEXT compatible multi-CD player, the disc and track titles begin to scroll to the left automatically. ■

50-disc multi-CD player

Only those functions described in this manual are supported for 50-disc multi-CD players. ■

Playing a MP3/WMA



These are the basic steps necessary to play an MP3/WMA with your built-in CD player.

① **MP3 indicator**
Shows when the MP3 file is playing.

② **Folder number indicator**
Shows the folder number currently playing.

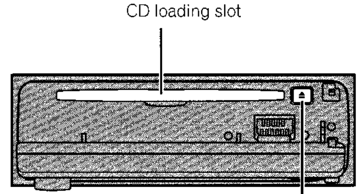
③ **Play time indicator**
Shows the elapsed playing time of the current track (file).

④ **WMA indicator**
Shows when the WMA file is playing.

⑤ **Track number indicator**
Shows the track (file) currently playing.
- If a track number 100 to 199 is selected, ► will light up above the last two digits of the track number.
- If a track number 200 or more is selected, ► will blink above the last two digits of the track number.

1 Press OPEN to open the front panel.
CD loading slot appears.
▪ After a CD-ROM has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD-ROM into the CD loading slot.
Playback will automatically start.



▪ You can eject a CD-ROM by pressing **EJECT**.
▪ To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

4 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

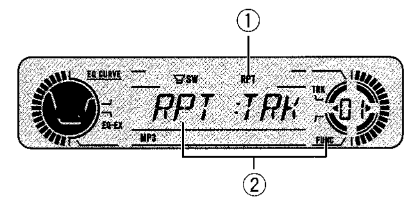
5 Press ▲ or ▼ to select a folder.
▪ You cannot select a folder that does not have an MP3/WMA file recorded in it.
▪ To return to folder 01 (ROOT), press and hold **BAND**. However, if folder 01 (ROOT) contains no files, playback commences with folder 02.

6 To perform fast forward or reverse, press and hold ◄ or ►.
▪ This is fast forward and reverse operation only for the file being played. This operation is canceled when the previous or next file is reached.
▪ If you select the search method to **ROUGH**, pressing and holding ◄ or ► enables you to search every ten track in the current folder.

7 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

Notes
- When playing discs with MP3/WMA files and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs, both types can be played only by switching mode between MP3/WMA and CD-DA with **BAND**.
- If you have switched between playback of MP3/WMA files and audio data (CD-DA), playback starts at the first track on the disc.
- The built-in CD player can play back an MP3/WMA file recorded on CD-ROM.
- Do not insert anything other than a CD into the CD loading slot.
- There is sometimes a delay between starting up playback and the sound being issued. This is particularly the case when playing back multi-session and many folders. When being read in, **FRMTREAD** is displayed.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- Playback is carried out in order of file number. Folders are skipped if they contain no files. (If folder 01 (ROOT) contains no files, playback commences with folder 02.)
- When playing back files recorded as VBR (variable bit rate) files, the play time will not be correctly displayed if fast forward or reverse operations are used.
- If inserted disc contains no files that can be played back, **NO AUDIO** is displayed.
- There is no sound on fast forward or reverse.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed.
- When an MP3/WMA disc is inserted, folder name and file name begin to scroll to the left automatically. ■

Introduction of advanced built-in CD player (MP3/WMA) operation



① **RPT indicator**
Shows when repeat range is selected to current track (file).

② **Function display**
Shows the function status.

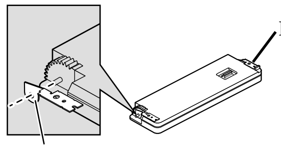
● **Press FUNCTION to display the function names.**
Press **FUNCTION** repeatedly to switch between the following functions:
RPT (repeat play)—**RDM** (random play)—**SCAN** (scan play)—**PAUSE** (pause)—**FF/REV** (search method)—**TAG** (tag display)
▪ To return to the playback display, press **BAND**.

Note
If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display. ■

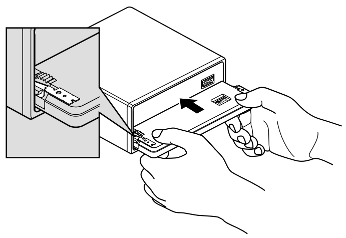
Fixing the Front Panel

If you do not operate the Detaching and Replacing the Front Panel Function, use the supplied fixing screws and fix the front panel to this unit.

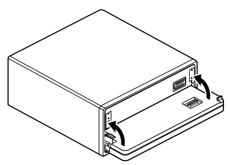
1. **Attach the holders to both sides of the front panel.**



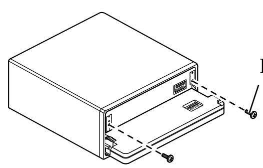
2. **Replace the front panel to the unit.**



3. **Flip the holders into upright positions.**



4. **Fix the front panel to the unit using fixing screws.**



● CONNECTION DIAGRAM(DEH-P550MP/XN/UC)

A

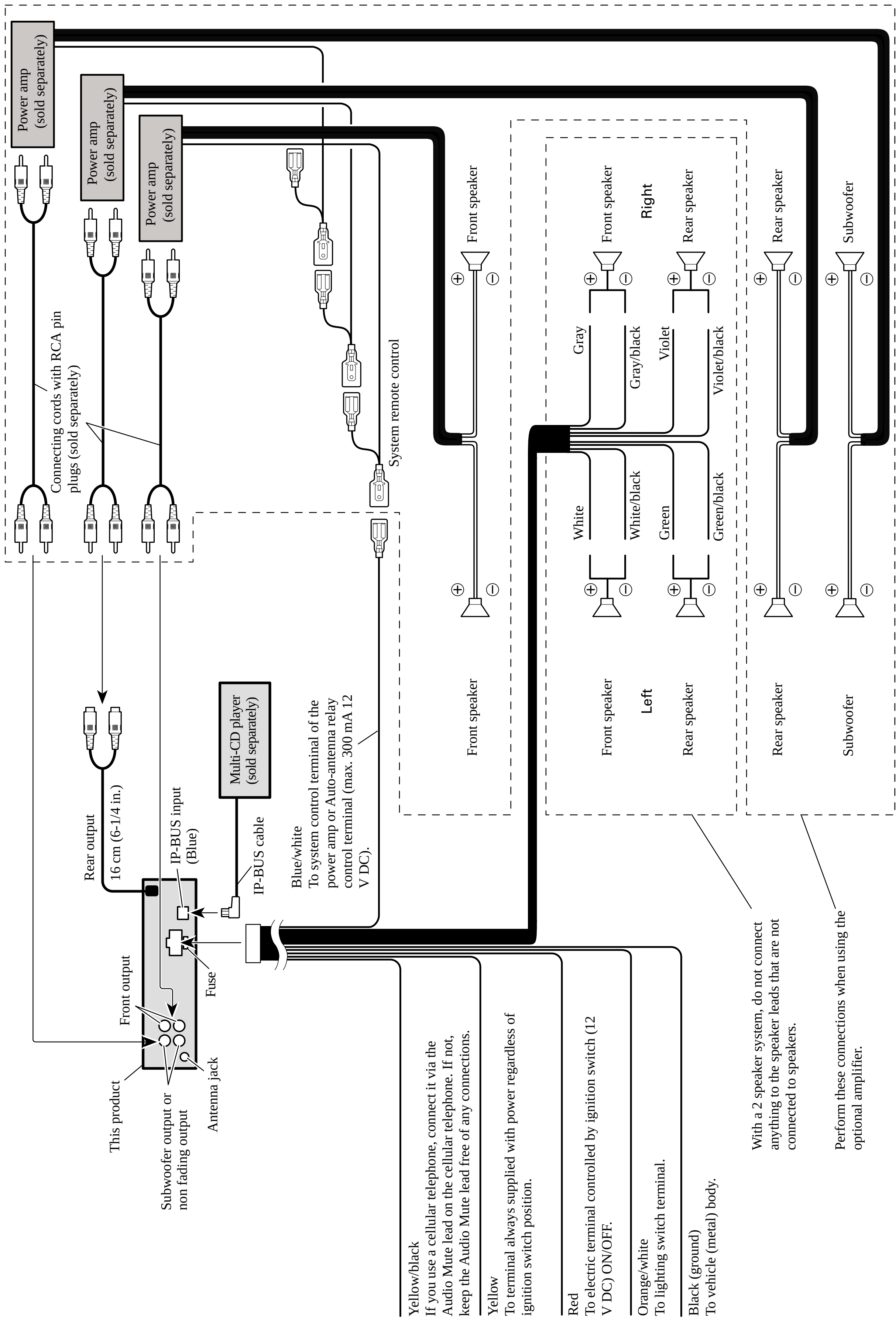
B

C

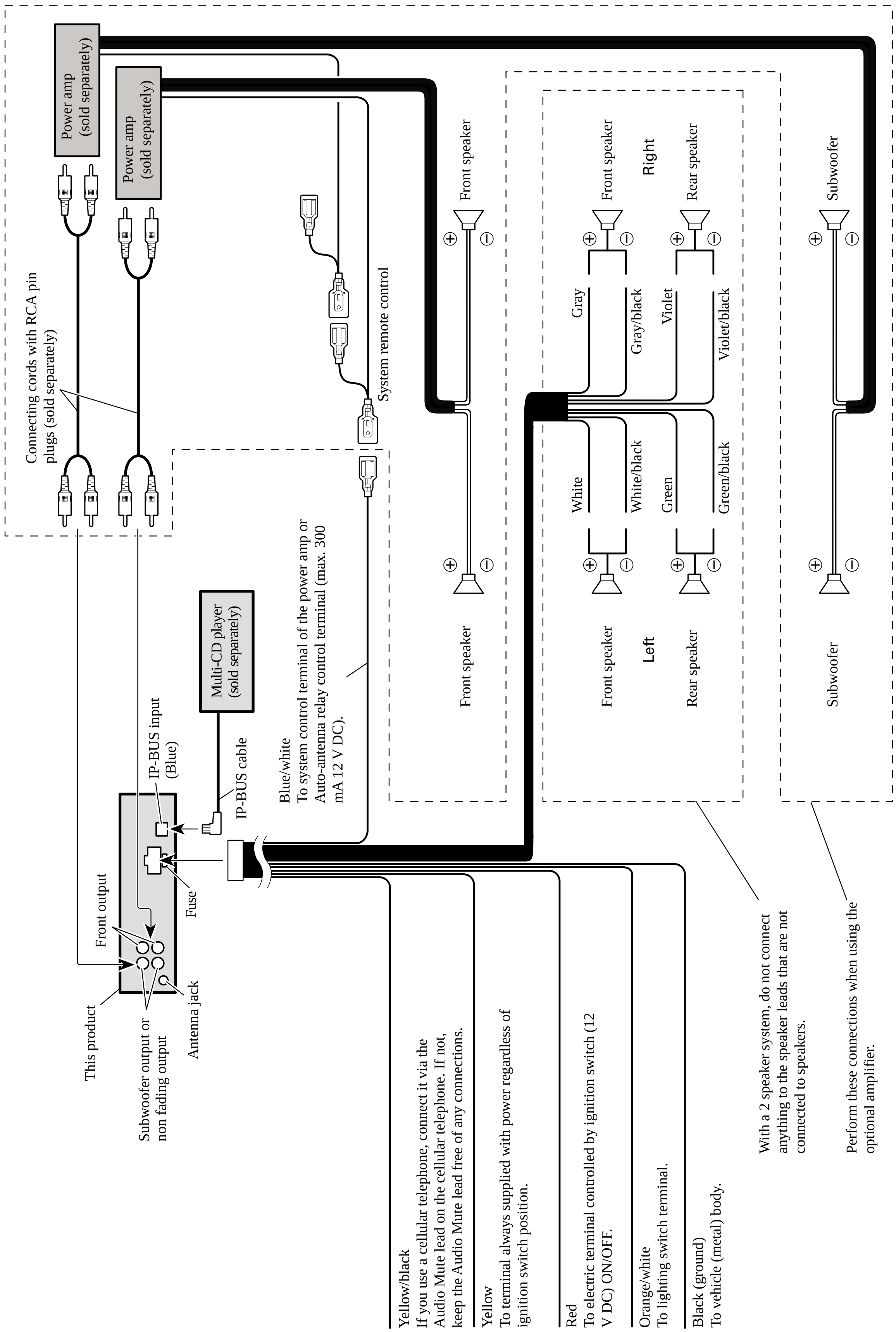
D

E

F



● CONNECTION DIAGRAM(DEH-P5500MP/XN/UC)



● CONNECTION DIAGRAM(DEH-P5550MP/XN/ES)

